



Energy for  
generations



# SUSTAINABILITY REPORT 2012

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We welcome requests and comments relating to the report and other sustainability matters via our contact mailbox: [sustainability@esb.ie](mailto:sustainability@esb.ie) or by contacting our Sustainability Coordinator: [brian.gray@esb.ie](mailto:brian.gray@esb.ie)



ESB continues to play a vital role in powering our country and our customers. In everything we do, our people are working together to deliver you a reliable, value-for-money energy service. We take pride in the contribution we have made to Ireland's economic development. Our infrastructure continues to deliver energy to you, in your home, your community and your workplace. Our focus is on ensuring that we manage every element of that process in a safe, environmentally responsible and efficient way.





# 2012 HIGHLIGHTS



## ENVIRONMENT

- ACHIEVEMENT OF A 33% CUT IN INTERNAL CARBON EMISSIONS SINCE 2006
- 13 TWH OF ELECTRICITY GENERATED FROM RENEWABLE SOURCES IN 2012
- 34% REDUCTION IN CO<sub>2</sub> EMISSIONS FROM POWER STATIONS IN REPUBLIC OF IRELAND SINCE 2006
- 10% REDUCTION IN ELECTRICITY CONSUMPTION ACROSS ESB PREMISES IN 2012
- 10% REDUCTION IN STAFF BUSINESS TRAVEL IN 2012
- ESB NETWORKS FLEET DELIVERED 190,000 LITRES IN FUEL SAVINGS IN 2012
- IN 2012, 1,875KM OF 10KV LINE WAS UPGRADED TO 20KV RESULTING IN ENERGY EFFICIENCY SAVINGS OF 19GWH



## COMMUNITY

- OVER 1,150 ELECTRIC VEHICLE CHARGE POINTS HAVE BEEN INSTALLED ACROSS IRELAND
- 250 SCHOOLS HAVE RECEIVED PRESENTATIONS FROM ESB STAFF AND TEACHERS ON ISSUES RELATING TO CLIMATE CHANGE
- ELECTRIC IRELAND WAS THE OFFICIAL ENERGY PARTNER TO TEAM IRELAND FOR LONDON 2012 OLYMPICS
- ESB'S CORPORATE RESPONSIBILITY FUND, ELECTRICAID IRELAND, DISBURSED €970,000 TO CHARITIES WORKING IN THE AREAS OF SUICIDE PREVENTION AND THE ALLEVIATION OF HOMELESSNESS IN 2012



## MARKET PLACE

- LAUNCH OF A NEW CORPORATE STRATEGY IN RESPONSE TO SIGNIFICANT CHANGES IN THE ECONOMIC, MARKET, FINANCIAL AND POLITICAL LANDSCAPE
- A GENERATION MARKET SHARE OF 48% AND A SUPPLY MARKET SHARE OF 36%
- 14 MILLION ELECTRICITY CUSTOMERS AND 80,000 DUAL FUEL CUSTOMERS
- SUCCESSFUL COMPLETION BY ESB NETWORKS AND NIE OF THE MARKET HARMONISATION PROJECT
- 1,740MW OF WIND GENERATION CONNECTED TO THE SYSTEM AT THE END OF 2012 IN THE REPUBLIC OF IRELAND



## WORKPLACE

- 10% OF STAFF NOW CYCLE TO WORK USING ESB BIKE SCHEMES AND DUBLIN BIKE SCHEMES
- 1 MILLION MINUTES PER YEAR SPENT WEB CONFERENCING WORKING SUSTAINABLY AND REDUCING MILEAGE BY 10%
- 640 SUSTAINABLE INNOVATIONS RECORDED BY STAFF IN 2012 ACROSS OVER 60 LOCATIONS IN IRELAND AND OVERSEAS
- MANY STAFF-LED INITIATIVES EMBEDDING SUSTAINABILITY IN OUR BUSINESS
- A FOCUS ON THE CLASSIFICATION OF NEAR MISS INCIDENTS BY POTENTIAL SEVERITY HAS ENABLED US TO IDENTIFY AND ACT UPON THE MOST SIGNIFICANT SAFETY RISKS TO THE BUSINESS DURING 2012





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**01**

# EXECUTIVE SUMMARY

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Pat O'Doherty, Chief Executive

To realise our ambition of becoming Ireland's leading energy provider in a world where resources are scarce and expensive, we have both a duty and an opportunity to address these issues in the way we do business.



## WE WILL REMAIN VERTICALLY INTEGRATED WITH A PRESENCE ACROSS THE VALUE CHAIN OF GENERATION, NETWORKS, TRADING AND SUPPLY

### 1.1. MESSAGE FROM CHIEF EXECUTIVE

The volatility and uncertainty facing the world remain the 'new normal' and are set to last for the medium-term. These on-going pressures – economic, social and environmental – frame our approach to our business strategy and our sustainability focus.

Our sustainability strategy supports our corporate strategy, giving life to our determination to build a successful business for the long-term and to find new and innovative ways to operate as we move to decarbonise our generation activities by 2050 in line with other European utilities.

Our business model is designed to deliver sustainable growth and is integral to how we operate. To realise our ambition of becoming Ireland's leading energy provider in a world where resources are scarce and expensive we have both a duty and an opportunity to address these issues in the way we do business.

On any given day millions of consumers avail of our services and we want to reach many more by developing innovative solutions that address different consumer needs in an all-islands (Ireland and United Kingdom) marketplace. To do this we will need to leverage our existing scale to help deliver sustainable, profitable growth by seeking to add value at every step in the value chain, enhancing product quality and customer service, and being innovative across all markets.

From leading the development of Smart Networks and facilitating renewables integration onto the network, to building a balanced low-carbon generation and supply business of scale in the all-island (Republic of Ireland and Northern Ireland) market, sustainability adds value to our business and is at the heart of the delivery of our corporate strategy.

From a business perspective ESB had a good performance in a most difficult year. ESB is a capital intensive business, investing over €750 million a year. Some of that money we can

generate from our businesses but we also need external funding. It is a tribute to our finance and treasury colleagues, and indeed to how ESB is perceived, that we were able to issue over €1 billion in the bond markets during 2012 to repay maturing debt and to fund our capital investment programme. In terms of our Performance Improvement Programme – we are on track to take €280 million out of our cost base by 2015; over €200 million has been secured to date. We have reached agreement with staff on the €140 million savings or 20% on our 2010 payroll. We will meet this target in part through savings associated with close to 1,000 staff exits since 2010, but there is still a shortfall to which everyone of us in ESB has to contribute. I want to acknowledge the huge loyalty and commitment of staff in this regard.

One of the key achievements for us as a Group was the launch of our new Corporate Strategy to 2025. This strategy equips us to grow and manage risks, while reaffirming what has always been our mission: to bring sustainable and competitive energy solutions to all our customers. Another





**Pat O'Doherty, Chief Executive, joins local school children in creating a mural in the cavern of Turlough Hill pumped storage hydro station.**

significant milestone for ESB during 2012 was our success in securing funding for Carrington power station in the UK. This project has been funded on a ring-fenced basis so it does not displace any of our investment in electricity infrastructure on the island of Ireland. Our ability to raise finance for this project, and indeed our two successful bond issues in the second half of the year, reflect market confidence in ESB's strategy and our ability to compete successfully.

Our performance in 2012 was over-shadowed by two staff fatalities in January 2013 – our colleague Shane Conlan who was working in a Finglas substation on January 15th and our colleague Oisín Crotty who died in a road traffic accident while driving to work on January 17th. It is an unimaginable loss for their families and traumatic for their ESB Networks colleagues. We also think of John Geraghty, an employee of Lyons Poling Contractors and of John O'Donnell, a Bord na Móna employee at Lough Ree Power who were fatally injured during the year.

In ESB Networks we invested €395 million in renewing and extending the transmission and distribution system. This allows us, for example, to bring new wind generation onto the transmission system and to improve reliability of supply through investment in the distribution system.

In Northern Ireland, NIE worked hard with the utility

regulator to finalise RP5. Despite, significant effort on both sides, the matter will proceed to the competition commission for review. During 2012 NIE continued investing and will continue to invest in the network.

In Generation and Wholesale Markets the highlight for me was the successful financing and start of construction of our Carrington power station project near Manchester. This investment in Britain is a huge statement of intent and of confidence that we can compete and prosper in the emerging British/Irish integrated electricity market.

In the supply business Electric Ireland is winning back customers through value for money and customer service which is ahead of its competitors. 2012 also saw the introduction of new energy efficiency product lines and offerings such as repair and servicing for boilers and heating systems, and a new remote heating device known as Climote.

ESB is committed to a low-carbon future. We started as a renewables company; our first station was the hydro generating station at Ardnacrusha. We have set ourselves the goal of achieving a net carbon neutral portfolio by 2050 at the latest. We continue to invest in the development of our renewables portfolio, with a target of 1800MW of renewable generation by 2025. Also in 2012,

our Ocean Energy project attracted EU funding. We want to stay at the forefront of emerging technologies such as smart grids, which will intelligently integrate the activities of all users of the network – generators and customers – with economic and environmental benefits. We will continue to rollout our public charging infrastructure to support the electrification of transport. And on the supply side of the business we want to encourage our customers to insulate their homes and to be smart in their consumption of energy.

Looking forward over the coming years, safety remains our top priority as our business performance must be underpinned by a strong safety record. Another priority is the emerging British/Irish market and positioning the business for the emerging regional electricity market by developing our generation portfolio in Britain. From being a big player in a small market, we are now going to be a small player in this bigger market. It is also very important that we build on progress to-date in meeting our performance improvement and cost reduction targets and maintain the financial strength of ESB by meeting our cost reduction and performance improvement targets and by aligning capital expenditure with the conditions in the financial markets. The Government has requested ESB to develop and deliver specific proposals for the sale of nonstrategic generation assets with the objective of paying special dividends to the State of up to €400 million. In making this request the Government explicitly recognised that maintaining ESB's investment grade credit rating is critical. We are proud to have contributed almost €1 billion in dividends to the State over the last decade and we are now actively identifying assets for sale on terms which do not compromise ESB's credit rating or strategic objectives.

**Pat O'Doherty**  
Chief Executive



Pat Naughton, Executive Director

Our approach to the wide range of energy challenges faced by society continues to evolve and mature, and our sustainability path reflects this growth.



## 1.2 .INTERVIEW WITH PAT NAUGHTON, EXECUTIVE DIRECTOR, GROUP PEOPLE AND SUSTAINABILITY

### Describe the key features of the Sustainability Programme to date and the Sustainability Report 2012?

This year's Sustainability Report marks the end of ESB's first five-year Sustainability Programme. Since 2008, the objectives and the accompanying strategies have helped us to remain focused on the sustainable delivery of the commitments we made to each of our key stakeholders.

In this year's report, we take time to reflect on the achievements of the past five years. This reflection also helps us look forward. We have spent time thinking about what sustainability means for ESB today and in the context of our future direction. Our approach to the wide range of energy challenges faced by society continues to evolve and mature, and our sustainability path reflects this growth.

### Sustainable Innovation is a key strategic objective for ESB.

#### What does that mean?

It represents ESB's commitment to a low-carbon future. Remember, we started as a renewables company; our first station was the hydro generating station at Ardnacrusha. We have set ourselves the goal of achieving a net carbon neutral portfolio by 2050.

Currently our generation portfolio includes 560MW of renewables and we want to get that to 1,800MW by 2025. In 2012 we completed wind turbine erection at our Carrickatane 21MW windfarm in Co. Derry and erection is underway at our 35MW windfarm in Myndd y Betwys in Wales. Also in 2012 our Ocean Energy project attracted EU funding.

### How was the new sustainability strategy developed?

During 2012, we worked with staff throughout the company to develop our new sustainability strategy. Seeing how comprehensively we had achieved the targets we set for the 2008 to 2012 period, in respect of reducing our

carbon footprint by 30%, we have once again set challenging objectives for ourselves.

### What is your vision of how sustainable working can benefit ESB?

My ambition is to ensure that we build on the fresh thinking and innovation that has been unlocked by our focus on sustainability and use this to inform the way we work throughout the company.

### What would you encourage people to look out for in the report?

The following pages show how we're driving sustainability with respect to our business, the environment and society. We invite you to take a look at how we're demonstrating accountability while driving efficiency and growth – in other words, how we're contributing to sustainable development, in all areas of our activity.

**Pat Naughton**  
Executive Director,  
Group People and Sustainability





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# 02 SUSTAINABILITY IN ESB

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## A LEADING IRISH UTILITY WITH FINANCIAL STRENGTH



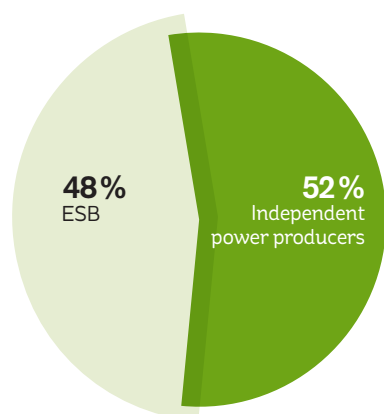
Donal Flynn, Executive Director, Finance and Commercial, pictured with members of the Group Finance Team with the awards for 'Best Annual Report'.

### 2.1. ESB PROFILE

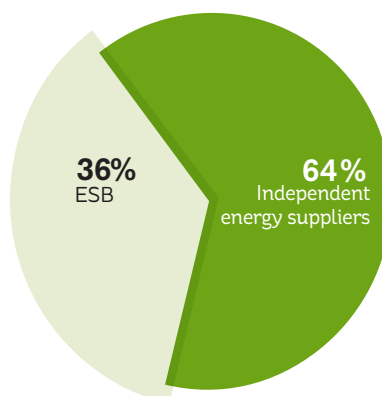
ESB, headquartered in Dublin, Ireland, was established in 1927 as a statutory corporation in the Republic of Ireland under the Electricity (Supply) Act 1927. With a holding of 95%, ESB is majority owned by the Irish Government. The remaining 5% is held by an employee share ownership trust.

In 2012, ESB's share of generation on an all-island basis was 48% and our share of the total supply business, again on an all-island basis, was 36%. Increasing interconnection to Britain and the arrival of large European utilities in our home market are transforming the competitive landscape.

GENERATION  
all-island market share



SUPPLY  
all-island market share



As a strong, diversified, vertically integrated utility, ESB operates right across the electricity market: from generation, through transmission and distribution to supply. In addition, we extract further value at certain points along this chain: supplying gas, using our networks to carry fibre for telecommunications, developing public charging infrastructure and more. With a regulatory asset base of approximately €8.3 billion, 43% of total electricity generation capacity in the all-island market and supplier of electricity to approximately 1.5 million customers throughout the island of Ireland, we are a leading Irish utility focused on maintaining our financial strength. As of 31 December 2012, the Group employed approximately 8,000 people across generation, transmission, distribution, supply and support activities.

### Our Sustainability Goals

- Maintain ESB's financial strength through a robust cost reduction programme
- Maximise the benefits of our status as a vertically integrated generation, transmission and supply business
- Maintain the programme of investment in networks and renewable generation
- Develop and provide new energy and innovative service offerings to customers
- Meet our annual safety and health and wellbeing objectives
- Deliver emissions reduction, energy efficiency, waste reduction and water conservation targets
- Ensure we use physical resources as efficiently as possible
- Promote the role of electricity in decarbonising the economy and develop a strong sustainability culture within the organisation to guide and shape our strategies, investments and operational activities
- Report our actions in a transparent and open manner and respond to the feedback received



# BUILDING A BALANCED LOW-CARBON GENERATION PORTFOLIO

ESB'S INVESTMENT IN A LOW-CARBON PORTFOLIO CONTINUED WITH THE CONSTRUCTION OF THE MYNDY BETWYS WIND FARM (35MW) IN WALES AND THE CARRICKATANE WIND FARM (21MW) IN NORTHERN IRELAND

## Generation and Wholesale Markets

Generation and Wholesale Markets (G&WM) comprises ESB's generation, trading and asset development activities.

The generation and trading business manages, operates and trades ESB's electricity generation portfolio in Ireland and abroad, subject to licence obligations with respect to ring-fencing. This portfolio includes 4.3GW of generation in the Single Electricity Market (SEM) and 0.4GW in Great Britain (GB).

Asset development activities comprise identifying and developing opportunities to enhance and expand the generation portfolio to achieve ESB growth targets. Our projects are managed from development through construction to commercial operations.

G&WM'S INVESTMENT STRATEGY IS TO BUILD A BALANCED LOW-CARBON GENERATION PORTFOLIO OF SCALE IN THE ALL-ISLAND MARKET

## Operating Environment

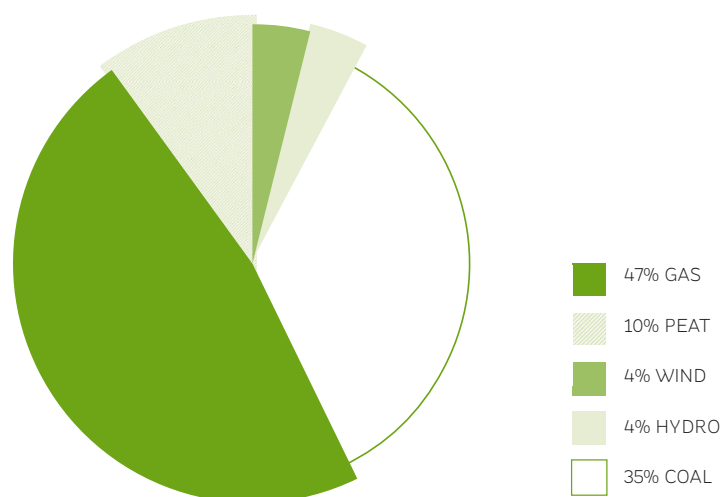
In 2012, ESB welcomed the decision by the SEM Regulatory Authorities which provided for the removal of ring-fences which historically segregated ESB's regulated and unregulated generation portfolios. The licence changes required to give effect to this decision will allow ESB to implement organisational and IT system changes to realise the benefits of greater integration of its generation businesses, which will result in costs savings and improved risk management.

The Government announced in October 2012 that ESB would be required to sell some non-strategic generation assets to provide an extraordinary dividend of up to €400 million by 2014. The Government reaffirmed its commitment that ESB would remain a financially strong, vertically integrated utility, that it would maintain its credit rating, and that it would retain significant scale to compete in the all-islands (SEM and GB) market while continuing to move to an appropriate market share in Ireland.



Cathleen's Falls hydro station, Co. Donegal. ESB operates 217MW of hydro and 292MW of pumped storage generation capacity.

## PORTFOLIO FUEL MIX 2012



## G&WM GENERATED APPROXIMATELY 13TWH OF ELECTRICITY FROM RENEWABLE SOURCES (WIND AND HYDRO) DURING 2012

### Investment and Growth

G&WM's investment strategy is to build a balanced low-carbon generation portfolio of scale in the all-Island market. The implementation of this strategy was advanced significantly in 2012 with the successful financing of the Carrington power plant near Manchester, UK. Construction commenced on this 881MW combined cycle gas turbine project in late 2012 and it is expected to reach commercial operations in early 2016.

ESB's investment in a low-carbon portfolio continued with the construction of the Myndd y Betwys wind farm (35MW) in Wales and the Carrickatane wind farm (21MW) in Northern Ireland. These assets will be operational in 2013, bringing ESB's operational wind portfolio to over 380MW. This adds to our existing 217MW of hydro and 292MW of pumped storage capacity. In total G&WM generated approximately 1.3TWh of electricity from renewable sources (wind and hydro) during 2012 – enough to supply the electricity requirement of around a quarter of a million households.

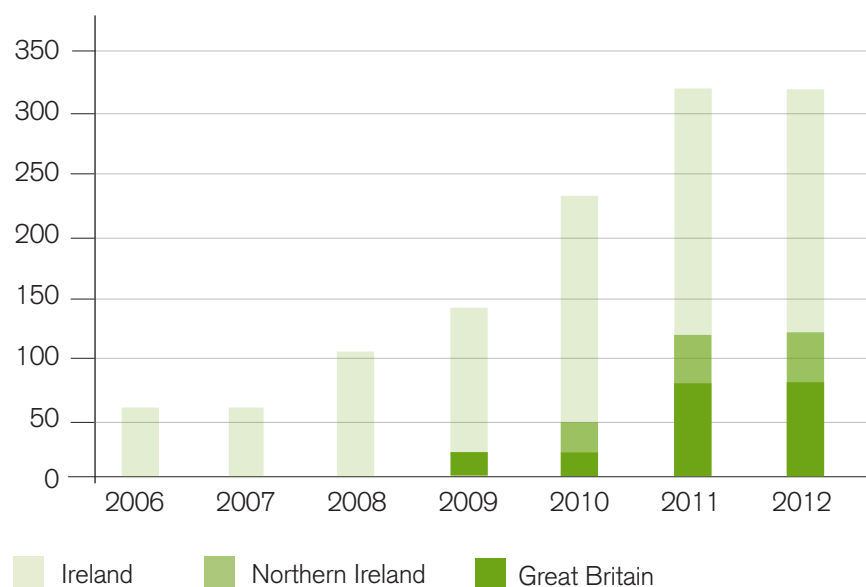
# 881<sub>MW</sub>

THE SIZE OF THE CARRINGTON POWER PLANT (GB) – A SIGNIFICANT GENERATION INVESTMENT IN THE REGIONAL ENERGY MARKET



By the end of 2012, ESB had an installed capacity of 334MW of wind farms.

### ESB'S WIND GENERATION INSTALLED BASE





# CONNECTING RENEWABLE ENERGY TO THE ELECTRICITY NETWORK

## ESB Networks

In 2012 ESB Networks focused on renewing and extending its distribution and transmission system.

### Improving our Networks

Capital investment on the networks system in 2012 totalled €395 million and was primarily focused on reinforcing the transmission system to accommodate new wind generation that is anticipated to be connected to the system before the end of the decade. By the end of 2012, approximately 1,740MW of wind generation was connected to the system and this is expected to increase to 5,000MW by the end of 2020. We also continued to invest in the distribution system to improve reliability of supply and ensure the safety of the network.

### Reducing Losses

Infrastructure renewal and upgrading the 10kV network to 20kV have also resulted in significant reductions in network losses. Conversion of a distribution line from 10kV to 20kV doubles the capacity of the line and reduces losses by up to 75%. In 2012, 1,875km of 10kV line was upgraded to 20kV resulting in energy efficiency savings of 19GWh.

To date, 42,000kms of 10kV network has been converted to 20kV, delivering approximately 180GWh savings in reduced losses. This is an equivalent saving of almost 180,000 tonnes of CO<sub>2</sub> per annum.

### Smart Networks

Smart networks are a key link in the integration of clean and renewable generation along the electricity value chain to customers and their energy devices. ESB Networks aims to be a recognised leader in the area of energy and environmental sustainability and has developed an integrated smart networks strategy to meet national targets.

The smart metering project has now commenced the detailed design stage. Under the governance of Commission for Energy Regulation (CER), the energy industry will work together over the next



Paul Mulvaney, Manager Distribution and Customer Service, ESB Networks, launches Powercheck app at the National Ploughing Championships in New Ross.

IN AN INTERNATIONAL SURVEY  
IBM RATED IRELAND'S NETWORK  
AS THE THIRD-SMARTEST  
WORLDWIDE

18 months to finalise the detailed requirements for the full roll-out of smart meters. ESB Networks co-ordinated the North Atlantic Green Zone Project proposal, a joint proposal of all the system operators on the island of Ireland, with the support of government bodies, to be included in the EU-wide list of Smart Grid Projects of Common Interest, which may attract EU funding from the Connecting Europe Facility and other EU funding budgets in 2013.

### Responding to Customers

In response to the increasing use of electronic

media to access information, ESB Networks launched PowerCheck, a free iPhone and Android smartphone app, which allows customers to view real-time information about planned and unplanned power interruptions and projected restoration times. In addition, the ESB Networks website was revamped in order to provide easier access to existing online information and a more service-based experience for the customer. Customer satisfaction with ESB Networks overall performance at 84% is at an all-time high. Telephone response rates to customers in the Networks Customer Care Centre (NCCC) continue to be at world-class levels.

BY THE END OF 2012,  
APPROXIMATELY 1,740MW  
OF WIND GENERATION  
WAS CONNECTED  
TO THE SYSTEM

# INVESTING IN OUR NETWORKS TO ACCOMMODATE RENEWABLE GENERATION



**NIE Crew work to restore supply following a storm.**

## NIE

Northern Ireland Electricity (NIE) is responsible in Northern Ireland for the planning, development, construction and maintenance of the transmission and distribution network and for the operation of the distribution network.

### Operating Environment

NIE derives its revenue principally through charges for use of the distribution system and Public Service Obligation (PSO) charges levied on electricity suppliers and charges for transmission services (mainly for use of the transmission system) levied on the electricity transmission system operator, SONI, in Northern Ireland.

### Investment and Growth

Since its privatisation in 1993, NIE has made significant investment in network infrastructure to meet requirements in respect of the connection of

renewable generation. In Northern Ireland there is currently 489MW of wind generation and 22MW of other renewable energy sources (RES) – hydro, ocean energy, RES CHP, solar and bio-energy – connected to the power system and 13% of electricity demand was met by renewable sources in 2012. During the period NIE has continued to invest in its infrastructure to replace worn network assets, to accommodate increasing load and new consumer connections and to meet requirements in respect of the connection of renewable generation. In addition, a new billing and market IT system, to facilitate full retail competition in the Northern Ireland electricity market, was successfully implemented in May 2012, in conjunction with ESB Networks.

In order to further strengthen the interconnection of the electricity networks of Northern Ireland and the Republic of Ireland, NIE will continue to

work jointly with EirGrid on the development of the 400kV Tyrone-Cavan interconnector. NIE's strategy in meeting these objectives will include maintaining a strong investment credit rating and ensuring the business is adequately resourced with qualified personnel to meet its obligations.

NIE is involved in a range of sustainability initiatives, including:

- Achieving ISO14001 certification for their Environmental Management System
- Facilitating the installation of 45 electric vehicle charging points across Northern Ireland for electric vehicles
- Actively reducing energy consumption over the past seven years achieving an overall reduction in energy consumption since 2005 of over 28%
- Increasing the efficiency of its transport fleet by 18% through a range of energy efficiency measures
- Involvement in pilot test studies on the potential of smart metering with customers

## NIE HAS MADE SIGNIFICANT INVESTMENT IN NETWORK INFRASTRUCTURE TO ACCOMMODATE RENEWABLE GENERATION



**INVESTORS  
IN PEOPLE**

NIE HAS ADOPTED THE INVESTORS IN PEOPLE FRAMEWORK TO SUPPORT AND DRIVE BUSINESS IMPROVEMENT



# HELPING CUSTOMERS TO IMPROVE THEIR ENERGY EFFICIENCY



Electric Ireland receive 'Best Sports Sponsorship' and 'Best Use of TV' at the 2012 Irish Sponsorship Awards.

## Electric Ireland

Electric Ireland is the retail arm of ESB, supplying competitive electricity, gas and energy services to all market segments.

## Operating Environment

With the entry of Electric Ireland into the competitive electricity and gas markets, competition intensified throughout 2011 and 2012, offering customers a choice of suppliers and competitive price plans. Electric Ireland has been competing effectively in the residential and business markets with competitively priced products with over 200,000 residential electricity customers returning to Electric Ireland in the last two years. Electric Ireland has also won over 80,000 residential gas customers since our entry into the residential gas market in April 2011. In a continuing drive to retain and win back residential customers, Electric Ireland successfully launched and developed new product offerings. These included competitive electricity price plans and building market share in the residential gas market.

## Energy Efficiency

In addition to competitive electricity price offerings, Electric Ireland has increased sales of energy efficiency measures through our home services offerings. A full installation service, including home insulation, gas boiler servicing and upgrades, heat pumps, solar panels, and BER (Building Energy Rating) certification is provided. A major urban refurbishment project of 500 homes was completed in conjunction

with Dundalk Town Council and the Sustainable Energy Authority of Ireland (SEAI).

## Supporting Customers

The economic downturn presents significant challenges for debt management. While proactively working to ensure that debt is collected, Electric Ireland has responded to customers experiencing serious hardship by:

- Identifying as early as possible when customer payments are in arrears and contacting them to discuss the options available. Electric Ireland made almost 220,000 tailored payment arrangements with customers in 2012
- Actively promoting the installation of pay-as-you-go meters for those in most difficulty. It is our objective to further minimise disconnections through the continued roll out of pay-as-you-go meters and special payment arrangements. As a result of these initiatives, we have reduced the number of customers disconnected by almost a third over the last two years at a time when other energy suppliers increased disconnections.
- Proactively engaging with St Vincent de Paul, the Money Advice and Budgeting Service (MABS) and other agencies to support customers experiencing affordability issues and those with special requirements.

Electric Ireland works with customers to help them reduce usage and get better value from their electricity consumption, through the promotion of energy efficient products and energy awareness campaigns. These campaigns included energy efficiency advice, ESB's online store and web-based tools including the 'Appliance Calculator' and the 'Energy Wizard' home auditing tool, also available as an app.

**IN 2012 ESB GROUP,  
THROUGH THE BETTER  
ENERGY WORKPLACES  
PROGRAMME, DELIVERED  
36 GWH PEE IN SAVINGS**



The Better Energy Programme, administered by SEAI, is a key component of the National Plan to deliver the EU target of 20% improvement in energy efficiency by 2020. As part of this programme, Electric Ireland plans to deliver over 180GWh of energy efficiency savings cumulatively for 2011 through 2013, the equivalent of the electricity consumption of over 35,000 homes. In 2012 this was achieved through a range of programmes, from retrofitting 2,000 homes to minimise their energy usage to a suite of measures to reduce consumption in commercial retail premises and eliminate energy losses in industrial processes.

Primary Energy Equivalent (PEE) savings were delivered through reducing losses on our network, energy efficiency projects at a number of generating stations and through reductions in fleet and business mileage. PEE is used to allow comparison between different forms of energy. It converts electrical energy into an equivalent quantum of primary energy using a nominal factor (2.5) which equates to generation efficiency of 40%.



David Begg, Electric Ireland Energy Services, completes an energy audit following the installation of energy efficiency upgrades at a residence.

# DRIVING SUSTAINABLE INNOVATION FOR A LOW-CARBON FUTURE



ESB International staff view works completed as part of the Millennium Project in Tanzania.

## Innovation in ESB

The challenges and opportunities presented by energy policy objectives to achieve decarbonised, sustainable and secure energy, call for new technologies, renewable resources and smart grids. ESB, as it has done over many years, is continuing to develop new technical and business solutions across the clean technology sector. The opportunities and issues arising apply right across ESB but it is recognised that the pace and breadth of developments require coordination and focused investment. A separate dedicated business area, Innovation, has been established to provide that coordination and strategic focus.

Innovation will leverage resources, sectoral insights and smart technology programmes across the ESB Group, to maximise returns from existing businesses and support the developments of new business opportunities.

Innovation groups together a number of businesses that are focused on leveraging assets and insight within ESB and using those to develop

new business opportunities. These business areas include:

### ESB International

ESB International has a proud tradition of providing solutions to customers around the world and, as the centre of engineering excellence for ESB Group, plays a leading role in the delivery of the overall group strategy through its support in the delivery of new networks and generation projects. New and emergent technologies are continually monitored and evaluated to determine where they can best be deployed to meet ESB's needs.

ESB International has been actively growing its external business key markets in Europe, Middle East, Africa and Asia for over 30 years. The range of services offered include the full spectrum of engineering solutions currently provided to the power sector, supplemented by consultancy services from other sustainable, innovative businesses developed in ESB, such as electric vehicles, ocean energy and smart grid technologies.

## Telecoms

Telecom's fibre-optic network forms a key part of the national telecommunications infrastructure, enabling broadband connectivity for businesses and consumers. This was significantly expanded in 2012, with the completion of a subsea fibre-optic cable directly linking Irish business to major UK cities. This fixed network is augmented by one of the largest networks of independent mobile tower sites in the country, allowing our customers to support the growing demand for services delivered over mobile devices and smartphones.

The next stage in the evolution of the telecoms offering will come with the recently announced Fibre to the Building initiative which has the potential to act as a major technology enabler for businesses and consumers right across the country.

## TELECOM'S FIBRE-OPTIC NETWORK FORMS A KEY PART OF THE NATIONAL TELECOMMUNICATIONS INFRASTRUCTURE





# INVESTING IN NEW TECHNOLOGIES

## Electric Vehicles

ESB is on track to having one of the most advanced electric vehicle infrastructures anywhere in Europe. The programme reached a milestone in December 2012 with more than 1,150 installed charge points, 500 of which are public, 550 domestic/commercial and 30 fast-charge points.

In addition, ESB is, in conjunction with major international partners, developing the business models and systems to support a commercial electric vehicle platform. ESB hosted an International Electric Vehicle conference in Dublin during 2012, with more than 260 delegates and speakers from Europe, US, Japan and China.

## Ocean Energy

Our Ocean Energy team continues to support a range of initiatives in this new and potentially transformative sector through its involvement in demonstration projects such as WestWave and support for research and development for the advancement of relevant technology. ESB also advocates the advantages of wave energy for Ireland at events, such as the International Conference on Ocean Energy, held in Dublin in 2012.

## Novusmodus

New solutions in technology and business models will drive changes in how power is generated, delivered and consumed and will come from a variety of sources – some of whom have no current connection to the energy sector. The Novusmodus fund was set up to invest in the renewable energy and energy efficiency sectors, and with a fund of €200 million it is one of the largest clean tech funds in Europe. This fund builds on the engineering expertise within ESB to evaluate and identify the most credible investments and support them through the delivery of their business plans – delivering both financial returns for ESB and increasing awareness within ESB of the new solutions being developed to meet the energy sector's challenges.



Chief Executive Pat O'Doherty in discussion with the Minister for Communications, Energy and Natural Resources Pat Rabbitte TD, at the International Electric Vehicle Conference in Dublin 2012.



An Asian delegation visits ecars as part of the Fully Charged 2012 Electric Vehicle conference.

Today, we remain as committed as ever to ensuring that Ireland's energy needs are met in a sustainable and resource efficient manner. Our support for electric vehicles is based on the fact that motorised road transport is responsible for a large percentage of greenhouse gas emissions. Electric cars emit zero tailpipe emissions and offer a real opportunity to reduce the carbon output of the transport sector, to reduce noise pollution as well as improve air quality. ESB is responsible for the roll-out of electric car charge points in Ireland. With three charging options available and an extensive nationwide charging network, electric car drivers will never be far from a charge point.



John McSweeney, Head of Innovation and Brendan Barry at the ESB stand during a conference on Ocean Energy.



John McSweeney and Nualight CEO Liam Kelly pictured with the Novusmodus-funded energy efficient lighting.

# IRELAND'S FOREMOST ENERGY COMPANY

## 2.2 ESB SUSTAINABILITY JOURNEY

Since being established in 1927, ESB has a proud tradition of being centrally involved in every aspect of the social, community and economic development of Ireland, from development of the Ardnacrusha hydro-electric station in 1927, through bringing electricity to every town and village in the 1950s, maintaining Ireland's energy security during the oil crisis of the 1970s through the development of Moneypoint coal station and Turlough Hill Pumped Hydro station and the development of competition on the island of Ireland with increasing focus on renewable generation and decarbonisation. In ESB we continue to play a central role in the economic, community and social development of Ireland by ensuring that we operate in a responsible manner across all aspects of our activities in Ireland and overseas.

ESB's corporate social responsibility aim is to be exemplary in every aspect of our business operations to ensure ESB has a positive impact on our staff, the markets in which we conduct our business, the environment in which we operate and the communities we serve. This ambition is aligned with our vision to be Ireland's foremost energy company competing successfully in the all-islands market and underpinned by our aim of conducting all our affairs with our customers, partners, stakeholders and the public with integrity and to the highest ethical standards.

We are committed to the highest levels of sustainability in all aspects of our operations as we move to decarbonise our generation activities by 2050 in line with other European utilities. Our new Corporate Strategy places a strong emphasis on sustainable innovation – embracing the challenges facing the energy sector, always seeking to deliver novel, creative and sustainable solutions that meet the needs of our customers.

### Customer Engagement

Demand-side management was a feature of our engagement with and education of customers from the 1980s onwards. We are committed to ensuring that people know how to use electricity safely and to



Chief Executive, Pat O'Doherty, An Taoiseach Enda Kenny and Plant Manager Catherine Halpin pictured at an event in Ardnacrusha Hydro Station held as part of ESB's 85th anniversary.

get value for money in their usage. This has been a continuing feature of our customer communications since that date. Our Energy Services business also supports residential and commercial customers in ensuring that their homes and businesses are running as efficiently as possible.

### Investment Programme

Our investment programmes are driven by the twin objectives of:

- Ensuring that we have an efficient, fit-for-purpose electricity infrastructure, capable of supporting smart networks and facilitating the connection of renewables onto the system
- Delivering an efficient, low-carbon and flexible generation portfolio.

We are investing for a future where energy consumers become active participants in designing their own demand and consumption behaviours. Our future customers will be capable of making decisions that have a positive influence on their environmental impact and overall energy expenditure.

## 2.3 SUSTAINABILITY CHARTER

In 2008, ESB developed a Sustainability Charter setting out ten key commitments for the Company. The principal target we set ourselves was to match our external carbon reduction commitments with a commensurate reduction in the carbon impact of our internal activities, in building energy management and fleet and fuel management. We also focused on waste reduction and water consumption efficiency – developing an overall sustainability programme for the company. In 2012 we exceeded our target of reducing our carbon footprint by 30%, delivering a 33% reduction over the period 2006 to 2012.

**ESB'S CORPORATE SOCIAL RESPONSIBILITY AIM IS TO BE EXEMPLARY IN EVERY ASPECT OF OUR BUSINESS**



# SIGNIFICANT ACHIEVEMENTS

## PROGRESS IN 2012 – DELIVERY OF THE SUSTAINABILITY PROGRAMME 2008-2012

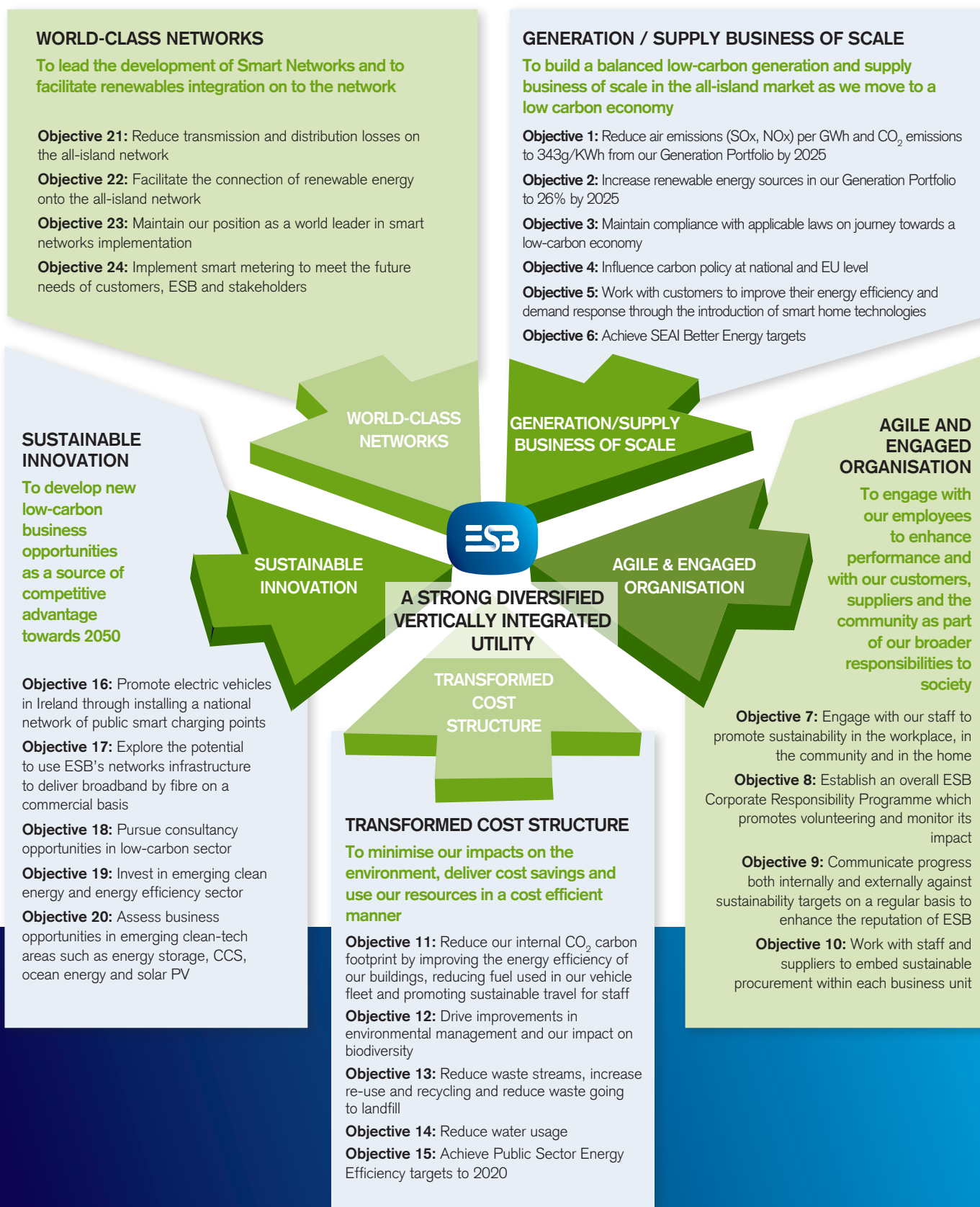
The delivery of our first Sustainability Programme, 2008-2012 has engaged a wide range of staff in the process of embedding sustainable practices at the heart of how we do business in ESB.

CHARTER COMMITMENTS:	PROGRESS BY END 2012
Reduce CO <sub>2</sub> emissions from generation in Ireland by 30% by 2012; 50% by 2020 and carbon neutral by 2035 (reductions based on 2005 baseline).	CO <sub>2</sub> emissions from generation in the Republic of Ireland have reduced by 34% since 2006. ESB has committed to achieve a net-carbon neutral portfolio across our generation activities by 2050 in line with other European utilities.
Adopting a target of a 30% reduction in carbon emissions from our internal business activities by 2012, in addition to our targets for the performance of Network and Generation assets.	At the end of 2012, ESB's internal carbon footprint has reduced by 33% against the 2006 baseline. We will continue to reduce our carbon footprint as part of our new Sustainability Strategy.
Committing to leadership in sustainability through partnership at all levels in the organisation.	ESB continues to use central and local partnership groups to further embed sustainability throughout the company supported by a network of sustainability champions with leadership and support from directors and senior managers in each business.
Reducing our impact on the environment to a practicable minimum through the prevention of pollution, reduction of waste and the efficient use of energy, water and other resources.	Formal accreditation of the environmental management system in Electric Ireland and a number of additional wind farms to the ISO 14001 standard was achieved during 2012, to add to the certifications already held by ESB Networks and each Republic of Ireland based generating station. In addition, during 2012: we have not had any major non-compliances or prosecutions from the EPA; we have implemented waste framework contracts throughout the business; and we also implemented a significant programme of water monitoring and subsequently reduced our water consumption.
Identification and dissemination of best practice in sustainability throughout ESB, including our international operations.	In 2012 we launched our Sustainable Innovations website which enables staff to share innovative sustainable ideas with other staff in other locations across ESB. Over 640 Sustainable Innovations were recorded in 2012 spread across 60 locations.
Integrating sustainability considerations into our procurement activities, as well as in our investment and expenditure decisions.	We undertook a further review of the impact of our procurement activities (including fuel) focusing in particular on the social and societal impact. Following this review ESB has proposed a revised Corporate Procurement Policy which includes key Corporate Social Responsibility principles in line with SA8000 social certification standard for industry.
Actively and effectively communicating and involving staff and contractors in identifying and implementing performance improvements.	The 2012 Sustainability Awards were selected from a shortlist of over 640 Sustainable Innovations which were proposed by staff across over 60 ESB locations in Ireland and overseas. As part of the review of the next phase of the Sustainability Strategy, a series of workshops were held with staff to canvas views, opinions and feedback on our work to date and on the next phase of our sustainability journey.
Adopting appropriate management structures, management systems and targets.	Our performance is overseen by the Health, Safety and Environment Committee of the Board. Sustainability targets are included for all ESB directors and business units. Cross-company sustainability initiatives are coordinated by a central sustainability committee.
Assessing the impact of our operations on biodiversity and implementing opportunities for enhancement.	The new Biodiversity Policy was launched in 2012 and communicated to all parts of ESB for inclusion within business unit EMS.
Openly reporting on our environmental performance in a verifiable way.	All ESB generation emissions are reported and verified to the relevant environmental authorities under the licensing regime and EU ETS scheme.  ESB produced its first Sustainability Report in 2010. Our 2011 Sustainability Report was aligned to the Global Reporting Initiative (GRI). We report our greenhouse gas emissions to the Carbon Disclosure Project.  In October 2011 ESB was one of four companies in Ireland to be accredited to the new Business Working Responsibly Standard (BWR).

# EMBEDDING SUSTAINABILITY

## 2.4 NEXT PHASE OF SUSTAINABILITY IN ESB

Having achieved our 2012 objectives, we have taken time to reflect on what we have learned over the past five years. This reflection has also helped us look forward and has informed the development of the next phase of our sustainability journey. Our approach to the wide range of energy challenges faced by society continues to evolve and mature, and our sustainability path reflects this growth.







**Pictured (l-r): ESB Networks MD Jerry O'Sullivan, Val Warren, Grainne Lavers, Paul Cahill, Dave Carey, Pat Naughton (Executive Director People and Sustainability) and Willie Heavin.**

Having achieved our 2012 objectives, we have taken time to reflect on what we have learned over the past five years. This reflection has also helped us look forward and has informed the development of the next phase of our sustainability journey. Our approach to the wide range of energy challenges faced by society continues to evolve and mature, and our sustainability path reflects this growth.

## 2.5 STAKEHOLDER ENGAGEMENT

ESB is a leading player in the Irish energy sector. Given our ownership structure, maintaining good relationships with our stakeholders and contributing to the ongoing debate about Ireland's energy future is important to us. We engage with our stakeholders at multiple levels and on a continual basis.

Key stakeholders include:

- The Minister for Communications, Energy and National Resources
- Department of Communications, Energy and National Resources (DCENR)
- Department of Finance

- Department of Environment
- Department of Public Expenditure Reform
- Social Family and Community Affairs and other Government Departments as required
- Financers, Ratings Agencies
- Staff Trade Unions
- Commission for Energy Regulation (CER) and NIAER
- Other Regulatory agencies (e.g., EPA, HSA, NPWS, Fisheries Board, county councils and SEAI)
- Sectoral representative groups (e.g., NCAI, IFA, ICMSA)
- Contractors and suppliers
- Representative associations (e.g., EAI, Eurelectric, IETA and IBEC)
- Community and charity groups (e.g., BITCI, Philanthropy Ireland, Vincent de Paul).

NIE engages with a number of key stakeholders in NI in delivering on its regulatory and business objectives.

During 2013 it is our intention to establish a stakeholder forum at which ESB will present

our Sustainability Strategy and performance against targets. This forum will assist us in future sustainability performance reporting.

## 2.6 STAFF ENGAGEMENT

Staff throughout ESB have been engaged with the sustainability agenda since the beginning of the programme in 2008. One of the great successes of the programme has been the way in which it has promoted innovation and fresh-thinking throughout the organisation, as teams and individuals identify new and more efficient ways of working.

### Sustainability Champions

Sustainability Champions are the backbone of this network of engaged and enthusiastic staff. These Champions are staff who, in addition to their normal duties, take on extra responsibilities associated with promoting and coordinating sustainability activities in their own locations. The Champions met in seven Champions League web-enabled meetings in 2012, where individuals provide updates on their own projects and hear about best practice from other locations. A Sustainability Forum was held in June 2012, where Champions heard about trends in business in Ireland and internationally in relation to the development of sustainable thinking.

### Sustainability Awards

Our annual Sustainability Awards recognise significant achievements by teams and individuals in delivering on sustainability goals. The 2012 winners were selected from a shortlist of 12. Assessors developed the shortlist from their review of over 640 Sustainable innovations, logged in over 60 ESB locations.

**SUSTAINABILITY  
CHAMPIONS ARE THE  
BACKBONE OF THIS  
NETWORK OF ENGAGED  
AND ENTHUSIASTIC STAFF**

# SUSTAINABLE PROCUREMENT



**Our Procurement policy gives assurance that adequate contractor employment standards are enforced and contractor staff are treated equitably by their employer.**

The 2012 winners were ESB Networks Wilton, for their comprehensive programme of work, personal and community sustainability and environmental initiatives. ESB Aghada and ESB Moneypoint came second and third respectively. An Individual Award was presented to Linda Daniel Christie, an ESB Sustainability Champion, for her work in leading the Grow-It-Yourself initiative in Head Office. The Schools Sustainability Programme received the Community Award.

## 2.7 SUSTAINABLE PROCUREMENT

ESB is committed to procuring goods and services in a sustainable manner. ESB's sustainable procurement objectives and

the process for achieving these objectives are understood and championed by all key procurement personnel across the business. The key sustainable procurement objectives are:

- Life cycle costing is adopted for all appropriate contracts
- All contracts that require the provision of labour on ESB sites are subject to the provisions of ESB Contractor Employment Standards Policy, which includes the provision of contractor sign-offs and third-party audits
- Specifications where appropriate call for the submission of sustainability variants
- Tenders take account of our ethical sourcing requirements

- Waste management and environment assessments are conducted in compliance with appropriate Business Unit Regulations

In 2012 we undertook a review of ESB's approach to ensuring a sustainable supply chain across all activities. This led to the development of a Sustainable Procurement Checklist, which is currently being trialled to ensure that sustainability is considered during all phases of the contract cycle. In addition, a four-year Sustainable Procurement Roadmap is under development to ensure that the delivery of our sustainable procurement goals and its associated review process are managed in a coherent and structured manner.

## 2.8 SCOPE OF 2012 REPORT

The information provided in this document addresses the year 2012 and meets the commitment given in our 2009 Sustainability Report to communicate to our stakeholders on an annual basis, our previous report being for 2011. With the exception of NIE, the report covers ESB Group activities where ESB has effective management control (de facto 50%+ ownership). From 2013 NIE will be included in our sustainability reporting.

We have sought to provide a range of indicators that we believe provides the reader with sufficient information on ESB's sustainability performance. The Report is based on the Global Reporting Initiative standard 3.1 and a referencing index can be found in section 08.

**ALL CONTRACTS THAT REQUIRE PROVISION OF LABOUR ON ESB SITES ARE SUBJECT TO THE PROVISIONS OF ESB CONTRACTOR EMPLOYMENT STANDARDS POLICY**





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# 03

## SAFETY, HEALTH & WELLBEING

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Chief Executive Pat O'Doherty engages in a safety forum discussion with Aghada staff.

### 3.1 OVERVIEW

We in ESB are fully committed to protecting the health and safety of our colleagues, contractors, and the people we serve. Safety is a core value of our company. Our belief is that all unsafe acts and incidents are preventable and all operational processes can be designed and operated in an inherently safe manner. This belief guides our approach to safety across all of our business activities and we take pride in our safety achievements.

We promote an open and proactive health and safety culture with the full involvement of all our people. This is reinforced through strong and visible leadership and by striving to achieve and maintain our safety goal of zero injuries. We are aware that safety is every individual's responsibility. Each of us has the responsibility to act immediately to prevent unsafe acts. If any task is not safe we do not do it. We comply with, and constantly aim to exceed, all relevant legal and regulatory health and safety requirements. We communicate the required safety standards and behaviours in a clear and unambiguous manner, with all necessary training, systems, and procedures put in place to support and continuously audit our safety performance.

ESB rigorously enforces its safety policies and standards to achieve its ultimate target of zero injuries. An extensive safety leadership programme,

fully supported by the Board and Management, is in place throughout ESB to address key safety issues. Staff and management at all levels are involved in undertaking safety audits and reviews. In relation to public safety, ongoing media and direct marketing campaigns are run to increase public awareness of the risks and dangers and ESB has developed a strategic partnership with the Health and Safety Authority to improve electrical safety in the construction and agricultural sectors.

### 3.2 HEALTH AND SAFETY POLICY

ESB commitment to health and safety is described in our ESB Group Policy and Framework Safety Statement. This is further described in individual business unit safety statements or safety policy manuals.

The overall Group objective is zero injuries. Achieving this requires the full understanding by everyone in the Group of their safety responsibilities and their commitment to fostering a pro-active safety culture, based on a duty of care for themselves, their co-workers and members of the public. Responsibility for safety in ESB proceeds from the Board through the Chief Executive, to all senior management and in turn to each manager, supervisor, team leader, and member of staff. The Board has in place a Committee on Health, Safety and Environment which considers and reports on matters of policy, strategy and

performance in relation to Health and Safety. Specific requirements regarding safety is included in managers' performance targets.

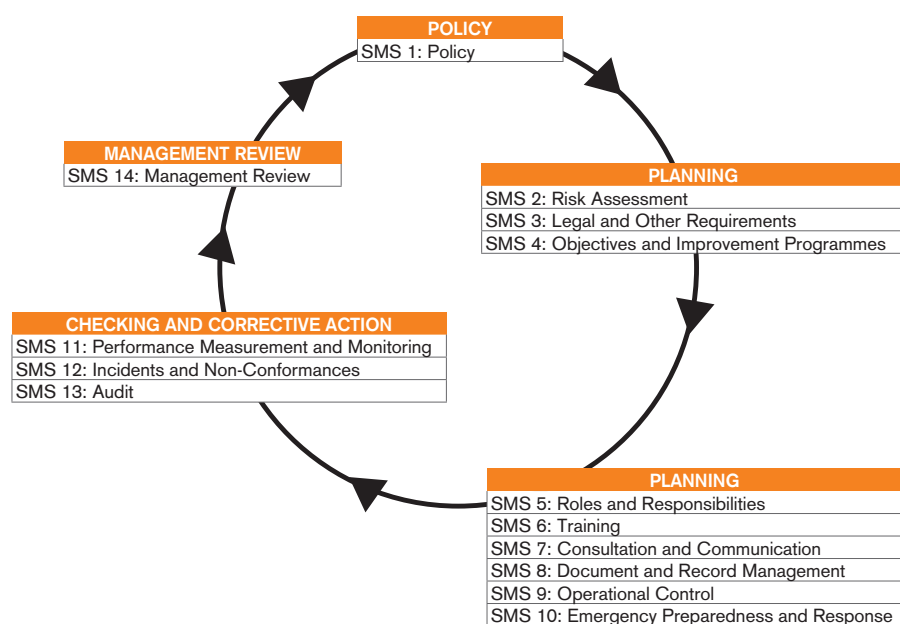
It is the responsibility of all line management to ensure that employees are trained and motivated to comply with ESB safety policy, safety statements, safety rules and procedures, safety standards and relevant laws. Line management also has a responsibility to keep itself fully informed of the impact that activities under its control have on safety policy, and to take corrective action as appropriate. Equally all employees have a responsibility to protect their own safety and that of others affected by their work, to avoid behaviours that could result in injury to others and to cooperate in implementing the safety policy, rules, standards, procedures, guidelines and codes within ESB.

#### ESB is committed to:

- consistently implementing our risk assessment policy to deliver the highest standards of safe design, construction, operation and maintenance;
- making continuous improvement in the safety and health impact of all our activities;
- maintaining awareness of advances in knowledge, changes in laws and the changing expectations of the public as regards safety, health and wellbeing and taking timely account of these developments;
- participating appropriately in discussions with policy and regulatory authorities, trade associations and other bodies in the development of improved laws, codes of practice and public understanding;
- complying with all health and safety, employment and equality legislation and the requirements of energy regulators;
- requiring contractors engaged by ESB to comply with ESB's safety standards as part of their contract; and
- promoting public safety through schools, trade and representative associations and other partnerships.



## OHSAS 18001 SMS1-14 STRUCTURE



### 3.3 SAFETY MANAGEMENT SYSTEMS

All ESB businesses have a safety management system in place. In the Republic of Ireland, all our safety management systems are certified to OHSAS 18001 standard and are subject to annual independent audit. As part of each safety management system, each business of ESB Group provides the resources, systems and controls necessary to manage and conduct work activities in such a way as to ensure, so far as is reasonably practicable, the safety, health and welfare at work of all staff and any other persons at the work location.

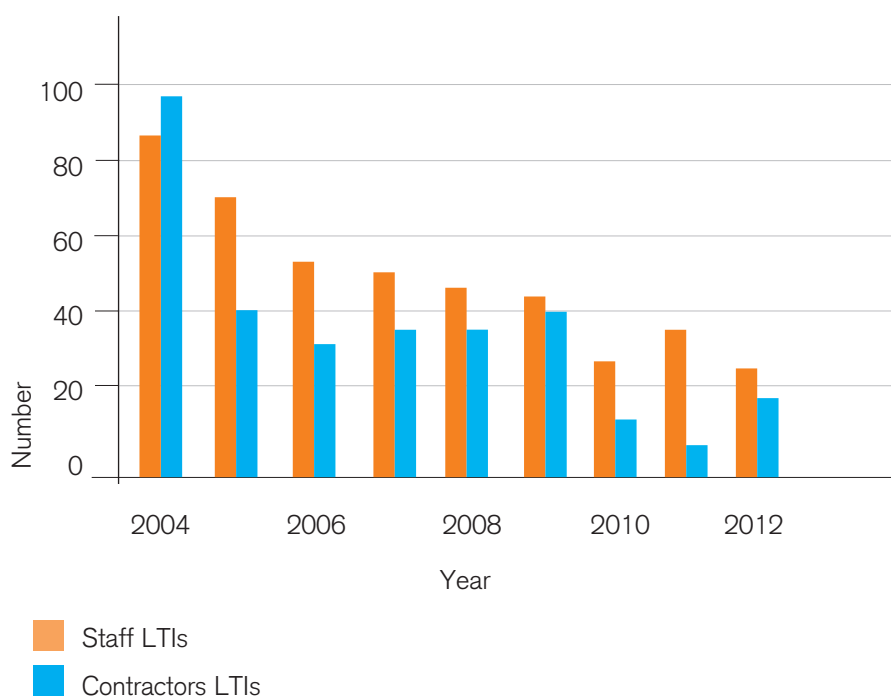
### 3.4 HEALTH AND SAFETY PERFORMANCE IN 2012

There were no staff fatalities in 2012, however, our performance in 2012 was sadly overshadowed by two staff fatalities in January 2013 to our colleagues Shane Conlan in Finglas substation on January 15th and Oisín Crotty, who died in a road traffic accident while driving to work on January 17th. We also think of John Geraghty, an employee of Lyons Poling Contractors Ltd and John O'Donnell, a Bord na Móna employee at Lough Ree Power who were fatally injured during 2012. Regrettably there were also two electrical fatalities to members of the public

during 2012: one from contact with overhead network and the other on the customer side of the meter. Any fatality associated with our business, whether a staff member, contractor or member of the public is deeply regrettable. Safety is our top priority and we will always put the safety of staff, contractors, customers and public first, relentlessly pursuing our goal of zero injuries and incidents.

Over the last number of years ESB has seen a steady reduction in the number of staff lost-time injuries (LTI) from over 300 LTIs in mid-1990s to 23 in 2012. Against a background of significant organisational change many parts of ESB maintained another injury-free year. Staff lost time injuries (LTI) decreased by 14% from 37 in 2011 to 23 in 2012. Contractor safety performance as determined by LTI disimproved over 2011 with a total of 14 recorded in 2012 compared to 8 in 2011. Key risks associated with lost time injuries include manual handling, slips trips and falls, and falls from a height.

## ESB STAFF AND CONTRACTOR LTIS 2004-2012



Since 2009, ESB has categorised lost-time injuries and near-misses according to the severity of injury or potential severity in the case of near-misses. This has enabled ESB to focus on and investigate through root-cause analysis high-potential near-miss incidents as another indicator of safety performance in the business. In 2012, ESB increased its focus on encouraging reporting and investigation of high potential near-miss incidents recognising the significant risks associated with electricity and driving. The reporting and categorisation of safety incidents has led to improved shared learning across the business areas. Investigation of high potential severity incidents in order to prevent their becoming future injurious incidents will be a key area of focus for 2013 as we continue our objective of achieving zero safety incidents to staff and contractors.



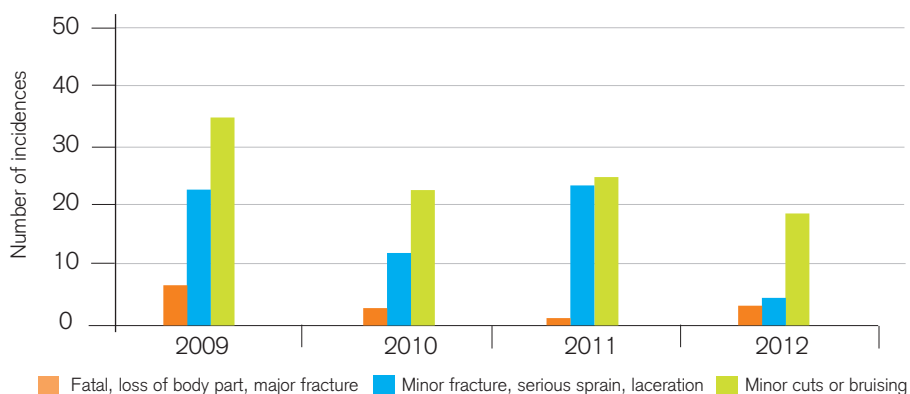
NIE supports the Safety First Programme for NI Kidz.

## KEY SAFETY OBJECTIVES

2012 TARGET	2012 OUTCOME	2011 OUTCOME
No staff fatality	0	1
No contractor fatality	1	0
No more than 25 staff LTIs	23	37
No more than 15 contractor LTIs	14	8
100% OHSAS 18001 coverage (by end 2012)	85%	50%
Absenteeism Rate less than 6.89 days/staff	7.67	7.54
Days lost due to injury (no target)	804	702

\* LTI = Lost Time Injury – an injury involving an absence from work of more than one day, excluding the day of the injury.

## STAFF INJURY SEVERITY



## 3.5 PUBLIC SAFETY

The main focus of ESB's public safety programme concerns the management of the risk of people coming into contact with ESB's network, plant and equipment. We also rigorously address the risks arising from our generation activities, in particular head and tail races associated with hydro-electric power stations. ESB plant and equipment is operated in line with international standards and legislation, including standards dealing with the risk of harm associated with electric and magnetic fields. While ESB is not responsible for public safety in people's homes, we deliver regular public safety campaigns to alert the general public to the potential dangers posed by electricity. In addition, many of the network refurbishment programmes which continued to be delivered during 2012, have a significant and beneficial impact on public safety.

Metal theft continues to be a major concern for electricity, telecommunications and railway utilities in Ireland, UK, Europe and North America in terms of the risk to public safety and to the environment. Other negative implications include increased costs arising from increased security measures, replacement of damaged equipment, as well as environmental cleanup



costs due to oil spillages. ESB continues to work closely with An Garda Síochána, Metal Theft Stakeholders Forum and its associated members to share information and assist the civil authorities.

Throughout 2012 we continued to meet our obligations and responsibilities for public safety by implementing our ESB Networks Public Safety Plan (2011-2012). This plan targets identified 'at-risk' groups such as construction, farming and leisure activities. An increasingly significant element of our public safety programme focuses on children with both school visits and promotion of the child-appropriate public safety content on the ESB internet site. Public safety information is also provided through our National Contact Centre, with safety booklets and other content mailed in response to specific requests.

## ESB PLANT AND EQUIPMENT IS OPERATED IN LINE WITH INTERNATIONAL STANDARDS

The following major public safety initiatives took place during 2012:

- Broadcasting of a full range of public safety radio advertisements on local and national radio stations
- Advertising in the national and technical press promoting awareness of the potential dangers from contact with ESB Networks' plant and equipment
- TV advertising throughout the national network of agricultural livestock marts.
- 'Keep Safe' safety awareness events for fifth and sixth class primary school children in association with the Health and Safety Authority and other national bodies, coordinated by Junior Achievement Ireland.
- Participation at the National Ploughing Championships in September, in conjunction with the Health and Safety Authority.



Minister for Transport, Leo Varadkar TD, Deputy Chief Executive, Brid Horan and Chief Executive RSA Noel Brett, deliver high-vis vests to a primary school as part of an Electric Ireland/Road Safety Authority safety initiative.

Electric Ireland is delighted to partner with the Road Safety Authority for the third year running to promote road safety among our youngest road users and their families. Since the beginning of this campaign, the RSA and Electric Ireland have distributed over 250,000

high-visibility vests to children starting school. This has helped ensure that our youngest and most vulnerable road-users are clearly visible on the roads at all times and reflects Electric Ireland's ongoing commitment to promoting safe road-use at all times.

## PUBLIC SAFETY PERFORMANCE

	2006	2007	2008	2009	2010	2011	2012
<b>Electrical</b>							
Number of notifiable faults including line drops	-	-	1,174	854	719	694	844
<b>Transport</b>							
Number of collisions	266	230	244	203	210	162	139
Number of vehicles in ESB Fleet	2,350	2,170	2,062	1,955	1,809	1,752	1,641
ESB driver at-fault	93	96	113	111	112	97	87



Turbine erection on a wind farm is a high risk activity during the construction process that requires competent contractors and coordination of activity.



Contractor activity peaks during periods of station overhauls.

### 3.6 SAFETY INITIATIVES IN 2012

#### Annual Safety Review

All ESB businesses are subject to at least annual management review of health and safety. From this review the following years Safety Improvement Plan is developed and targets agreed. This is then monitored at regular intervals as part of the safety management system.

An overall end of year safety review took place on December 5th at which each business presented on its safety performance for 2012 with all members

of the Executive Directors Team in attendance. This forum enables all senior management teams to share knowledge, learning and experience on common safety challenges for ESB.

#### Contractor Safety Management

Safety management of contractors remains a key area of focus for ESB to ensure that each contractor and sub-contractor, working for or on behalf of ESB is properly inducted and that each contractor operates under a safe system of work. This is supported by contractor safety management processes in each business area. Our focus is on ensuring that all large contractors working on behalf of ESB have a safe system of work with evidence available to demonstrate this. Specific activities undertaken in 2012 include:

- Regular reporting of contractor performance
- Induction of contractor staff
- Training for ESB staff in managing contractors
- Reducing the number of contractors working on behalf of ESB by consolidating service delivery to improve safety performance
- An emphasis on behavioural safety
- Sharing knowledge and experience of Contractor Safety Management tools and systems through ESB

#### 4You Programme

The human factor component of incidents has become increasingly prevalent in the incidents reported in ESB over the past five years (e.g., communication, supervision, attention, stress and fatigue, safety culture, violations, unsafe behaviours).

The 4You programme has been developed as a preventive approach designed to tackle the human factor and behavioural component of safety in ESB.

During 2012, significant work was undertaken to develop the leadership aspects of the programme, as well as continuing the programme delivery in the Generation and Wholesale Markets business. Programme delivery to the G&WM business will conclude during 2013, with the focus of attention then turning to ESB Networks.



### Safety Auditing

Our risk assessment and behavioural audit systems are a key part of our overall safety management systems and provide valuable learning and insights for management and staff as part of continuous improvement on safety. There are three levels of auditing undertaken in ESB, including:

- system audits to determine appropriateness and effectiveness of safety management systems;
- audits of locations to determine if staff or contractors are working in a safe environment and the public are sufficiently protected from harm from our activities. These audits might include air sampling, noise monitoring and water quality testing; and
- audits of tasks, activities and behaviours to determine if staff and contractors are working safely.

Details of audits are recorded on a corporate safety auditing system. In 2012 over 7,500 audits were conducted across all areas of ESB activities.

THE 4YOU PROGRAMME HAS BEEN DEVELOPED AS A PREVENTIVE APPROACH DESIGNED TO TACKLE THE HUMAN FACTOR AND BEHAVIOURAL COMPONENT OF SAFETY IN ESB



Safety auditing is critical to demonstrate safety leadership, identify and rectify safety risks and commend safe behaviours and practices.

### Driving

Driving and road use remains a significant hazard for ESB. In 2012 we launched a new Safe Driving Strategy to 2020 with the aim of reducing at-fault road traffic collisions to zero. During 2012 we continued to reduce our road traffic collision numbers to 139 and Class A collisions reduced by 43% to 14. Since 2003 we have reduced the number of collisions involving ESB vehicles by 53% and completed over 1,700 advanced driver training qualifications for staff who drive as part of their work. This programme is a risk management response to the potential risk associated with driving.

### Safety Competency

ESB is committed to establishing and maintaining appropriate safety competence in the organisation. Since establishing a dedicated Certificate in Safety and Health at Work with University College Dublin, a total of 379 ESB staff and managers have successfully completed the course.

### Safety Communications

Staff are represented in formal structures that monitor, advise and respond to health and safety matters and health and safety issues are discussed through an extensive system of safety committees and forums throughout the business. Each business area or location has joint staff/management safety committees where health and safety issues are discussed and addressed in a partnership approach. Each business unit has an overall health and safety committee.

The Chief Executive chairs the Chief Executive Health and Safety Committee, which visits different locations to engage with staff on safety matters. Our risk assessment and behavioural audit systems provide further opportunity for direct input on safety by staff. The outcome of these measures is reflected in our staff survey results, which show that almost 80% of staff has a positive view on safety in ESB.



ESB Networks crews support severe weather supply restoration in Scotland and Northern Ireland.





Attendees at the Chief Executive Health and Safety Committee meeting as John Campion hands over the Chairman's role to Chief Executive Pat O'Doherty.

### Health and Wellbeing

ESB is strongly committed to supporting staff in maintaining good health and wellbeing to enable them to perform in the workplace and to live a balanced and healthy life. In these challenging times in Ireland, we believe that there is a greater need for the provision of support and the promotion of health and wellbeing to maintain a healthy and high performing workforce.

We provide support to our staff through our well established services including Health Services, Employee Assistance Programme and Equality and Diversity programmes, which are all aimed at assisting staff during these challenging times. ESB's in-house Employee Assistance Programme (EAP) provides professional and confidential support to individual staff members who are experiencing personal problems/issues. Typical issues that can arise include problems relating to physical and mental health, financial and relationship/family issues.

### Health Maintenance Programme

ESB supports staff with a comprehensive programme of health promotion, including an in-house medical officer and a health promotion unit. Our health maintenance programmes are focused on general health advice and support, with an increasing focus on the mental health area. We also maintain an extensive health service offering versatile programmes for the promotion of a healthy lifestyle such as diet, information and advice and exercise initiatives to engage staff in enjoyable activities and team events.

**OUR HEALTH MAINTENANCE PROGRAMMES ARE FOCUSED ON GENERAL HEALTH ADVICE AND SUPPORT, WITH AN INCREASING FOCUS ON THE MENTAL HEALTH AREA**

Some of the programmes provided to staff during 2012 include:

- General health screening – cardiovascular health screening, bowel cancer screening, flu vaccination and smoking cessation programmes
- Briefings on health and fitness throughout the year
- Regular communications to staff on health topics via intranet site, including exercise, diet, stress management, mindfulness and meditation practices
- Staff Olympic Challenge – engagement of staff in making pledges of healthy lifestyle changes, e.g., change in diet, new exercise regime to coincide with ESB sponsorship of Team Ireland at the London 2012 Olympic Games
- Specific programmes aimed at improving mental health and resilience of staff in these challenging times



A crane lifts a section of the base tower for erection on the controlled hard standing area at Carrickatane wind farm. With so many contractors on site during the turbine erection phase, safety coordination is a key issue.



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**04**

# ENVIRONMENTAL AND CLIMATE CHANGE

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#### 4.1 OVERVIEW

The long-term need to decarbonise European and global societies to address the threat of world-wide climate change will present an enduring challenge to the energy industry over coming decades. At a European level, this is reflected in a comprehensive set of European Union and national laws and regulations, including the 20-20-20 targets agreed by European leaders in 2007 as part of the EU Climate and Energy Targets.

Current EU policy is to reduce total societal carbon emissions by 80% by 2050. In the near term, there are also legally binding targets at European and national levels to decrease carbon emissions, increase the proportion of energy from renewable sources and enhance energy efficiency by 20% before 2020.

The impact of these policies for the markets in which ESB operates will be profound. There are currently government policies in place to ensure that, by the end of this decade, 40% of electricity generated within the Irish market and 30% within Britain will be sourced from renewable sources. In addition, over the long-run, societal decarbonisation will require new business models, regulatory frameworks and technologies – for example, a move from dispatchable thermal generation to a greater reliance on intermittent renewables such as wind. Decarbonisation will require a significant increase in the level of investment in generation and networks infrastructure across the European utility industry.

### ESB HAS PROGRESSIVELY IMPLEMENTED A STRUCTURED APPROACH TO ENVIRONMENTAL MANAGEMENT

To prosper in such a context, ESB must innovate by investing in low carbon technologies and evolving new business models. In 2008, ESB



**Continuing expansion of our renewable energy portfolio is central to our commitment to developing a carbon-neutral generation portfolio by 2050.**

was one of the first utilities in Europe to commit itself to a net zero-carbon generation portfolio and ESB's new strategy continues that focus.

#### 4.2 ENVIRONMENTAL MANAGEMENT SYSTEMS

ESB has progressively implemented a structured approach to environmental management since 1993, when our first management system was put in place. In 1999 we were successful in accrediting our first generating station to the international standard ISO14001. All our generating stations have since been accredited to this standard.

Our Networks and Electric Ireland businesses

put significant effort into achieving the ISO 14001 standard and were awarded accreditation in early 2011 and 2012 respectively. We have also implemented internal environmental management systems in our International and services businesses in line with the ISO 14001 standard. A cross-business unit working group monitors developments related to these management systems and also legal compliance.

Our EMS provides a structured basis from which to ensure all the environmental aspects of our operations are considered, all impacts assessed and work programmes established to mitigate and minimise our impact.



### 4.3 AIR EMISSIONS

The primary source of discharges to the environment (air, water and land) is from our generation activities. These activities, other than those in relation to renewable energy (wind and hydro) where emissions are negligible, are subject to control under the EU's Integrated Pollution Prevention and Control (IPPC) Licensing regime as applied in the jurisdictions in which they operate. Detailed information on all emissions from our licensed activities in the Republic of Ireland and information on individual power station environmental programmes are reported to the Environmental Protection Agency (EPA) on an annual basis.

Total demand for electricity in the all-island market declined by almost 3% in 2012, the fourth consecutive year of demand contraction. Continued high natural gas prices and relatively

competitive coal prices combined with depressed carbon prices in the Emissions Trading Scheme (ETS) resulted in increased coal plant running throughout 2012. These factors also resulted in reduced gas fired plant running which constitute the majority of capacity on the system. G&WM's balanced portfolio, with a mix of fuels including coal, gas, peat, wind and hydro, has helped ESB to weather these market trends.

As a result of increased coal plant running in 2012, overall CO<sub>2</sub> emissions increased in 2012 over 2011 however, since 2006 ESB has reduced its carbon emissions from its power stations through plant retirement, divestment and investment in new low-carbon and renewable energy generation sources. Emissions of SO<sub>x</sub> and NO<sub>x</sub> have increased in 2012 over 2011 although emissions have reduced significantly since 2006

due to significant investment in reducing air emissions from our Moneypoint coal plant.

### 4.4 WATER

Generation activities account for the vast bulk of our utilisation of water and our aqueous discharges. The volumes attributable to our two largest usages, for hydro production and as cooling water in thermal stations, are not recorded. The operation of our hydro facilities are subject to a number of constraints reflecting the priorities of other stakeholders. The principal constraints relate to prioritisation for drinking water abstraction at our dams on the Liffey (Dublin/Wicklow) and Lee (Cork) and flood control at all other facilities.

In addition, to make-up water for steam generation, our estuarine and riverine stations are designed to operate on once-through cooling water systems where water is abstracted, passed through the generation unit's condenser and returned to the abstraction source at an elevated temperature (approx. 9°C temperature increase). Chlorine is added to the cooling water (as hypochlorite) at a controlled rate to prevent microbial growth on condenser parts that reduces the operational efficiency of the plant. Cooling water flow and discharge conditions regarding temperature are subject to conditions set in Integrated Pollution, Prevention and Control Licences (IPPC).



An increased number of electric vehicles in our fleet, a biofuel programme and other fuel saving measures have helped reduce ESB Networks fleet emissions by 20% since 2006.

### MAJOR EMISSIONS TO AIR IN ALL-ISLAND MARKET

	2006	2007	2008	2009	2010	2011	2012
Nox ktonnes	20.38	19.85	16.66	9.02	7.42	5.20	8.004
Sox ktonnes	25.36	23.62	18.09	10.82	6.66	7.70	8.24
Dust ktonnes	1.13	1.46	0.703	0.503	0.272	0.319	0.287
CO <sub>2</sub>	12.4	11.4	11.0	9.3	9.8	8.8	10.8

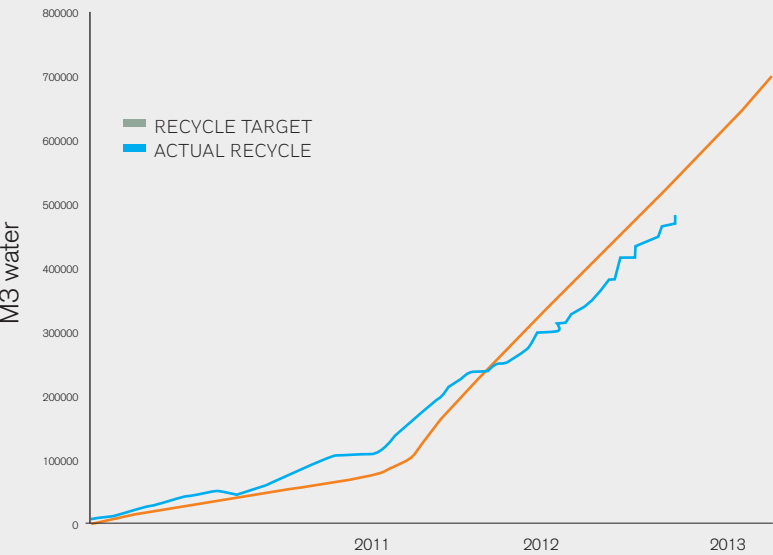
Since 2006 there has been a 61% reduction in NO<sub>x</sub>, 68% reduction in SO<sub>x</sub> and 75% reduction in dust emissions in our Republic of Ireland power stations.

SINCE 2006 ESB HAS REDUCED ITS CARBON EMISSIONS FROM ITS POWER STATIONS THROUGH PLANT RETIREMENT, DIVESTMENT AND INVESTMENT IN NEW LOW-CARBON AND RENEWABLE ENERGY GENERATION SOURCES



Moneypoint staff receiving 2012 safety award from Paddy Hayes, Executive Director, Generation and Wholesale Markets. Insert: John Wall, Station Chemist, Moneypoint.

MONEYPPOINT WATER RECYCLING



**Moneypoint Water Recycling Project**  
This project commenced in 2010 by identifying potential sources for capturing run-off, waste water and drainage systems

for recycling and return to the process. Phase 1 saw the installation of pump system for recycling station drainage back to the Wet Ash transportation system. Phase 2 looked

at capturing run-off water around the site, including rainwater collection from the coalyard and put in place a system to recycle this for use in the process.

Collectively, these recycling innovations will reduce water usage by half a million m<sup>3</sup> of water to the station since the project began. Consequently, this has resulted in significant savings in use of raw water, which reduces demands on the local Clare County Council water infrastructure.

In 2008 Moneypoint brought the MERP (Moneypoint Environmental Retrofit Project) online to reduce NO<sub>x</sub> and SO<sub>x</sub> emissions. This significantly increased raw water consumption for the site. The water recycling projects are on target to fully offset this increase in usage, so that consumption will be at the level it was prior to installation of MERP.

#### 4.5 WASTE

Ash from the combustion of coal and peat is the largest volume waste material produced by ESB. In 2012, 235kt of ash was produced, comprising 145kt coal ash and 90kt peat ash. In addition, operation of the flue gas desulphurisation (FGD) plant at Moneypoint gave rise to 92kt of FGD by-product waste. ESB continues to seek beneficial uses for waste ash to minimize requirements for landfilling, including developing options for sales of high-quality coal ash for alternative uses.

Due to the current downturn in the construction

industry within Ireland and consequent collapse in demand for cement, use as an additive in cement was very low in 2012 (\* see ash production and recycling table).

Over the last few years, there has been a concerted focus on waste management. In ESB Networks, we've managed to increase our Depot Municipal Solid Waste Recycling Rate to 71% in 2012. ESB Networks have also managed to reduce the amount of general waste going to landfill by 18% in 2012, further to a 41.3% reduction in 2011, delivering overall significant savings.

#### 4.6 TRANSPORT

Given that our Networks vehicle fleet is responsible for approximately 50% of ESB's internal carbon footprint, reducing transport emissions is a key element in meeting our carbon reduction target. Progress in reducing transport emissions was maintained in 2012 based on our 'Green Fleet' programme. Since 2006 we have reduced our fleet fuel consumption by over 1 million litres per annum, representing a 20% improvement.

During 2012, a Fleet Management System has been installed throughout the ESB Networks fleet, which has helped deliver fuel savings of 190,000 litres.



ESB uses 75% environmentally-friendly cement (Ecocem) in our wind turbine foundation mixes.

#### ASH PRODUCTION AND RECYCLING

STATION	ASH PRODUCTION			RECYCLED		
	2010	2011	2012	2010	2011	2012
Moneypoint	127,200	118,600	144,800	45.50%	41.50%	0.50%*
Lough Ree	32,800	50,100	48,800	0%	0%	0%
West Offaly	43,100	32,700	41,400	0%	0%	0%
Total Ash	203,100	201,400	235,000	28%	24%	0%
FGD By product	61,500	52,400	92,200	0%	0%	0%

ONGOING PROMOTION OF OUR WEB CONFERENCING FACILITY HAS SEEN A SUBSTANTIAL INCREASE IN ITS USE SINCE BEING INTRODUCED. NOT ONLY DOES IT CONTRIBUTE TO REDUCING TRANSPORT RELATED CARBON, IT DERIVES ADDITIONAL BENEFITS RELATING TO INCREASED PRODUCTIVITY AND REDUCED COSTS TO THE BUSINESS.

SINCE 2006 WE HAVE REDUCED OUR FLEET FUEL CONSUMPTION BY OVER 1 MILLION LITRES PER ANNUM



Car pooling scheme launched with Dublin City Council.





Raising awareness on energy saving behaviours and measures is a key aspect of our schools engagement programme.

#### 4.7 ENERGY USAGE 2012

In 2012 ESB consumed 30,595GWh of fossil fuel energy in generating electricity in the Republic of Ireland.

This comprised:

- 12,097GWh of natural gas
- 13,492GWh of coal
- 4,630GWh of peat
- 376GWh of oil

In relation to energy use, which we are required by statute to report, the amount of energy used in our buildings constitutes the most significant portion, followed by that used in our fleet and in private cars used on company business. The bulk of energy use in buildings is attributable to space heating.

Internal use accounted for 117GW Primary Energy Equivalent (PEE) in our non-generation activities (155GWh in 2006). This consisted of:

- 65GWh of electricity as PEE
- 1GWh of natural gas
- 51GWh of transport diesel
- 0.3GWh of renewable energy in transport

#### Actions Undertaken to Reduce Energy Usage in 2012

ESB's generating plants are subject to the IPPC licensing regime and are required to optimise energy efficiency. Generation efficiency is also promoted as a result of the requirement to purchase emissions allowances under the EU's emissions trading scheme and the application of the carbon levy. In 2008

ESB adopted a target of a 30% improvement in non-generation energy efficiency by 2012, against a 2006 baseline in the context of a government objective for the public sector of a 33% improvement by 2020.

Steps to deliver this target in ESB continued in 2012, including:

- undertaking trial installations of electric pumps and other efficient energy systems in our office buildings as part of the Better Energy Programme (DCENR);
- continued upgrade of the electricity networks system and the conversion of network from operating at 10kV to 20kV;
- installation of energy efficient lighting and advanced lighting controls;
- insulation, boiler and heating control upgrades;
- installation of advanced controls for exterior lighting;
- implementation of centralised IT energy savings projects;
- implementation of specific energy efficiency projects in power stations;
- introduction of electric vehicles to our fleet and continued trials of biofuels (ESB has the largest fleet of biofuel vehicles in the country);
- introducing a web-based meeting/communications facility to avoid the need for business travel; and
- introducing workplace travel planning to reduce fleet and business mileage.

We will continue to deliver efficiency savings in all aspects of our business in 2013.

#### 4.8 BIODIVERSITY

The EU Birds and Habitats Directives set out various procedures and obligations in relation to nature conservation management in member states in general, and of the Natura 2000 sites and their habitats and species in particular. The Natura 2000 network in the Republic of Ireland is made up sites, which include:

- Special Areas of Conservation (SAC);
- Special Protection Areas (SPA);
- candidate Special Areas of Conservation (cSAC);
- proposed Special Protection Areas (pSPA).

A number of initiatives have been developed to address biodiversity, including:

- incorporating biodiversity aspects into existing environmental management systems;
- the adoption in 2009 of biodiversity guidelines for HV substations and sample biodiversity action plans;
- the preparation of Networks job aids addressing biodiversity; and
- the preparation, with EirGrid, of draft ecology guidelines for electricity power lines.

In 2012 ESB undertook a comprehensive study on biodiversity issues to develop a methodology to guide incorporation of the ESB Biodiversity Policy (launched in 2011), including the ESB Environmental Policy into the Environmental Management Systems for all ESB businesses.

#### BIODIVERSITY TABLE

	TOTAL	INSIDE SAC	INSIDE SPA	INSIDE NHA	INSIDE PNHA
Lands under the control of ESB (km <sup>2</sup> )	90.7	23.4	36.5	5.1	45.6
Low Voltage Stations (No.)	249,000	2504	1793	102	2312
38kV to 400kV Overhead Lines (km)	12,330	291	186	38	254
38kV to 400kV Cable (km)	1,319	16.9	20.0	0	29.0



Taking a clip for DNA analysis as part of the Atlantic Aquatic Resource Conservation Programme. ESB's Parteen breeding programme participates in this initiative.

#### Fisheries

Dr Kieran McCarthy, from National University of Ireland Galway, has led one of the most important European research projects investigating silver eel movements on the rivers Shannon, Erne and Lee. The project,

undertaken on behalf of ESB, uses hydro-acoustic tags and Didson high-definition sonar, along with field work, to test any diversion effect upon migrating eel into alternative safer bypasses (spillways) at hydro stations.

#### 4.10 ADAPTATION

While focusing our attention primarily on mitigation, it is understood that climate change increases the risk of more frequent and extreme weather conditions which will have implications for electricity systems and requires us also to consider adaptation.

The most significant threat arises in respect of our networks infrastructure, all of which is located in the Single Electricity Market region, and relates in the main to the intensity of future wind and precipitation events.

ESB keeps abreast of developments in relation to adaptation, including participation in national fora on the topic. ESB has yet to undertake a detailed assessment of its requirements for adaptation. We are aware that modelling projections indicate that Ireland, due to its geographic location, will experience less intense consequences from climate change than most other global regions. Results from formal adaptation assessments in the UK\*, which is likely to face similar impacts to Ireland, suggest that the evidence does not support adjusting network infrastructure design standards. Risks posed by flooding are well understood and are managed on an ongoing basis.

\* Climate Change Adaptation Report by National Grid Electricity Transmission plc, September 2010

### ESB KEEPS ABREAST OF DEVELOPMENTS IN RELATION TO ADAPTATION

#### 4.11 ENVIRONMENTAL EXPENDITURES

Defining what constitutes an environmental expenditure is a subjective matter. For this reason ESB does not separately report capital and operational environmental expenditures.

#### 4.12 COMPLIANCE

There were no material non-compliances with IPPC or other licence conditions or prosecutions arising from our activities in 2012.

#### 4.9 MATERIALS

The materials employed in our operations of environmental concern consist of fuels for electricity generation and transport, specialist oils and sulphur hexafluoride (SF<sub>6</sub>) for use in transformers.

We have been monitoring transformer and other oils for polychlorinated biphenyls (PCBs) for almost three decades. Accordingly we are confident that the oils in all fluid-filled equipment are either PCB-free or have concentrations of PCB that are below the allowed limit level (50 ppb).

In addition, Generation and Wholesale Markets has carried out a total review of all transformers. The oil samples from these transformers were sent to an independent accredited laboratory for analysis. All results have indicated that these transformers are PCB-free.



SF<sub>6</sub> gas is widely used in transformer cooling.





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# 05

## SOCIAL





**ElectricAid celebrated its 25th anniversary in 2012. The staff charity has helped people in Africa, Asia, South America and Eastern Europe as well as those here in Ireland who are less fortunate because of disability or social disadvantage.**

### 5.3 EDUCATIONAL SUPPORT

In 2012 we recruited 40 new electrical apprentices, 30 above our required number. The additional 30 will be routed into funded third-level engineering degree programmes.

The ESB Traineeship Programme for People with Disabilities continued in 2012. There has been an average of ten placements opportunities identified each year for this programme. While the programme offers the participants an opportunity to develop workplace skills through temporary placements in ESB locations throughout the country, it also helps to positively alter perceptions throughout the organisation with regards to people with disabilities.

ESB is a supporter of the Engineers Ireland Steps Programme (supporting student engagement with maths and engineering). We also supported the annual Engineers Ireland Excellence Awards, continuing our long-term commitment to this event.

ESB is a participant in the Business in the Community Schools Business Partnership Programme. In 2012, ESB partnered with seven schools through this partnership, offering career guidance, mentoring and CV development support. ESB's Sustainability Engagement Programme, a DVD designed for use in primary schools to explain issues relating to climate change and energy efficiency (originally developed in 2011), continued to be used throughout 2012, and was presented by staff and teachers in over 100 schools throughout the country.

**ESB IS A PARTICIPANT IN THE BUSINESS IN THE COMMUNITY SCHOOLS BUSINESS PARTNERSHIP PROGRAMME**

### 5.1 OVERVIEW

ESB's status as a State company, our role in the social and economic development of Ireland and our extension to every household gives us a unique connection to the communities in which we operate in Ireland. We provide support and sponsorship to these communities directly as a company and through the activities of our staff.

### 5.2 EMPLOYMENT

In 2012 we launched our new Corporate Strategy which outlines our strategic objectives in this area. Underpinning this strategy is our intent to develop our organisation through an engaged and agile workforce and a culture of high performance. ESB has responded to a changed industry environment by working with our people, across the organisation, in the transformation of our cost base to secure our future. Guided by our mission and our vision for the future and staying close to our values, we take on the challenges this future

now brings, keeping those positive attributes that have served us so well through our history.

#### STAFF BREAKDOWN 2012

Average Number of Staff	6,811**
Female (%)	24%
% Management Level Female	20%
Permanent Contract	93%
Temporary Contract	7%
Full Time (%)	94%
Part Time (%)	6%
Staff with Disabilities*	5%
Staff with Irish Nationality	95%
* The target set by Government is to achieve a 3% rate of employment of people with disabilities	
** Excludes NIE (1,300)	



Jerry O'Sullivan, MD ESB Networks Ltd with staff following CPD reaccreditation from Engineers Ireland.

#### 5.4 EMPLOYMENT ASSISTANCE PROGRAMME

ESB's in-house Employee Assistance Programme (EAP) provides professional and confidential support to individual staff members who are experiencing personal problems/issues. Typical issues that can arise include problems relating to physical and mental health, financial and relationship/family issues.

#### 5.5 LEARNING AND DEVELOPMENT

The creation of an engaged and agile organisation has been identified as a critical enabler of our future success. ESB is committed to building a sustainable high performance culture through enhancing our people's capability to foster positive relationships and engagement across the organisation. For example, we have:

- committed to a three-year leadership programme for senior managers; and
- developed a number of programmes aimed at enhancing the people management capability of both newly appointed and more experienced line managers continue with the delivery and enhancement of our HRM Programme for Line Managers which is an accredited CIPD certificate programme.

ESB promotes continuous professional development to ensure that staff in ESB have the skills and the competence required for individual and organisational success.

#### 5.6 CONTINUOUS PROFESSIONAL DEVELOPMENT (CPD)

ESB is an Engineers Ireland CPD accredited company. We recruit engineering graduates each year based on business needs. In 2012, ESB won the gradireland 'Most Popular Graduate Employer' award in the engineering sector. We also recruit apprentice network technicians and after one year these apprentices have the opportunity to compete for ESB engineering undergraduate scholarships.

Other graduates are selected to participate in our Trainee Accountant Programme (ACCA, CIMA or ACA accredited). ESB continues to participate in the Government's national internship scheme, JobBridge, which provides individuals who have been on the live register for at least three months with the opportunity to undertake a quality internship in an organisation in the private, public, community or voluntary sectors for a six or nine-month period. ESB has pledged to provide up to 200 internships throughout the company during the scheme's lifetime.

To date we have appointed 81 interns throughout the Company. 39 of those 81 interns have since left the Company and approximately 50% of those have found paid employment. This undoubtedly meets the purpose of the JobBridge scheme by making people more employable by giving them the opportunity to gain experience in their career of choice.

ESB also remains committed to supporting FIT Ltd, a registered charity and not-for-profit organisation, whose mission is to promote an inclusive smart economy by creating a fast-track to marketable technical skills for those at risk of long-term unemployment. Each year ESB hosts a number of conferences where students are given an insight into how the corporate business world operates.



The Central Procurement team in G&WM turned their hand to helping the less well-off members of the community as part of a team development day for Stepping Stone, a charity providing communitybased housing for the homeless and helps them return to full independent living.





On October 5th 2012 the Diversity Charter Ireland was launched. The signing of this charter is a voluntary commitment by 11 organisations to effective diversity management, preventing discrimination and promoting equality with respect to all their stakeholders and the environment in which they operate. The founding Irish signatories are: ESB, An Post, Dell, Dublin Bus, Dublin City University, Equality Strategies, IBEC, Permanent TSB, Rehab, Sodexo and Telefonica.

## 5.7 EQUALITY AND DIVERSITY

The Equality and Diversity Office supports the delivery of work within ESB, in line with the nine grounds of equality legislation. As a leader in this area, ESB promotes a diverse and inclusive work environment, supporting our people through work-life balance and initiatives that take account of the various life stages. Dignity and respect in the workplace is at the core of our business with a focus on training and development of managers and staff on achieving positive work environments, as well as training for staff and managers on dealing with issues of bullying and harassment.

The work of the Equality and Diversity Office is supported by trained dignity at work contact people. In 2012, ESB was one of the founding signatories of the Diversity Charter Ireland, together with ten other companies based in Ireland. The charter is a public statement by the signatories, to promoting effective diversity management and equality.

- The organisation is predominantly a male workforce
- 23% of staff are female with 3 females at ESB Board level
- 20% of managers are female

### Community Engagement on our Wind Farms

Community engagement around ESB wind farms is governed by ESB's wind farm community engagement policy, which was signed-off by ESB Board in 2011.

In 2012, ESB constructed two wind farms, one in Carrickatane in Northern Ireland and one in Mynydd y Betws, Wales. The project teams on both projects engaged extensively with local communities during construction. The types of activities engaged in included, site visits by local representatives, ESB staff holding information days, ESB staff attending local and community council meetings to update them on construction activities.

In 2012, the Executive Director Team signed-off on a control framework for the management of community funds associated with ESB wind farms. ESB launched two community funds in 2012 one at Huntershill in Co. Tyrone and the other in Mountainlodge, Co. Cavan

In 2012 ESB appointed a tour guide to its wind farm in Fullabrook in the UK. Over 350

people visited the site where they learned about how the turbines work and what the main drivers are for the wind industry. In Ireland, members of adult VEC courses on renewable technology visited sites in Co. Roscommon, Galway and Leitrim to learn about turbine technology.



Supporting local community initiatives is an important aspect of community engagement on our wind farms.





Irish Olympic athlete David Gillick.

### 5.8 SPONSORSHIPS

2012 was a busy year for ESB as Electric Ireland was 'official energy partner' to Team Ireland for London Olympics 2012. We were also pleased to continue our support to great Irish events such as Feis Ceoil and Electric Picnic.

#### Team Ireland

Electric Ireland was the 'official energy partner' to Team Ireland for the London Olympics 2012. The sponsorship was announced in September 2011 and ESB worked in partnership with the Olympic Council of Ireland to support Irish athletes in their quest to qualify for Team Ireland.

Electric Ireland's sponsorship was designed to support Irish athletes and their fans in the lead-up to the Olympics. The support programme included an integrated communications campaign featuring Ireland Olympic hopefuls in TV, radio, press, PR and outdoor advertising.

#### Feis Ceoil

Electric Ireland was proud to support Feis Ceoil 2012, which welcomed over 5,000 classical musicians for this annual music competition. Classical musicians from all over Ireland competed at the RDS Dublin during this 11-day festival of classical music. Rounding off this two-week event, a selection of the most outstanding competitors played at a special Gala Concert in the National Concert Hall.



A group of staff from across ESB take a well-earned break en route to completing the O2O challenge, covering over 280km from Dublin to Cork, raising money for local charities in the process.



Electric Ireland sponsors high-vis vests for primary school starters.

#### Electric Picnic

Electric Ireland was the 'official energy partner' to the 2012 Electric Picnic Festival. As part of its support for the festival the business provided 6km of energy-efficient festoon lighting around the camp sites and walkways to the main arena. This reduced the festivals lighting emissions by up to 80%.

#### Road Safety Authority

In 2012 Electric Ireland was delighted to partner with the Road Safety Authority for the third year running to promote road safety among our youngest road users and their families. Since the beginning of this campaign, the RSA and Electric Ireland have distributed over 250,000 high-visibility vests to children starting school.

## 5.9 PHILANTROPY

### Electric Ireland €1 Million Winter Charity Programme

In December 2011 Electric Ireland launched its €1 million Winter Charity Programme to support two important Irish charities – St Vincent de Paul and Alone. Electric Ireland has a long tradition of working with St Vincent de Paul. Electric Ireland also supported Alone by carrying out energy efficiency retrofit work on Alone properties and donating additional funds to support its fuel affordability programme.

### 5.10 ElectricAID Ireland

Over the last seven years, the company-funded charity ElectricAID Ireland has spent over €6 million on a journey of hope all over the island of Ireland. As chosen in a staff vote, these resources have been committed to the fight against two social problems – homelessness and suicide. A further €970,000 was allocated to 130 projects in 2012.

### 5.11 ElectricAid

ElectricAid is the staff social justice fund for staff and retired staff of ESB and EirGrid. It is generously supported by matching ESB and EirGrid funds. The fund contributes to the development of peoples at home and abroad through co-funding of projects that aim for long-term sustainable improvement in wellbeing of communities.

ElectricAid celebrated its 25th anniversary in 2012. The fund was honoured by a tribute paid by the President Michael D. Higgins to its work and to its contribution to development. In 2012, ElectricAid income was €1.3 million. This facilitated the organisation in providing normal development funding and emergency relief funding. Between these three categories ElectricAid funded 180 separate projects.

### 5.12 HUMAN RIGHTS PROTECTION

ESB's primary focus for capital investment is Europe. In this context, the company does not address human rights issues explicitly in its investment contracts given the extensive body of



Chief Executive Pat O'Doherty, Chairman Lochlann Quinn and President Michael D. Higgins attend ElectricAid 25th anniversary.

legislation that exists within Europe and the ease of access to remedial measures. We promote respect for human rights to staff through our Charter on Dignity in the Workplace.

Fuel for electricity generation represents our most significant ongoing cost. Coal is a major component of our fuel supply and is sourced from a number of regions including southern Africa and South America. On foot of a review

following concerns raised in respect of human rights and environmental degradation we now include in all our contracts either a requirement to respect and act in accordance with the ten Principles of the United Nations Global Compact or specific requirements to comply with all laws in respect of human rights, labour, health and safety, environmental stewardship and business integrity.

## 2012 AWARDS

### DURING 2012, ESB ACHIEVEMENTS HAVE BEEN RECOGNISED ON A NUMBER OF FRONTS:

Annual Energy Retail Market Consumer Survey 2012 (CER)	Electric Ireland residential customers have the highest customer satisfaction rating with their supplier
Electric Ireland's Customer Contact Centre	Achieves ISO 27001 accreditation
The Diversity Charter in Ireland	ESB is one of the first 11 signatories to this new Charter
WAM (Willing Able Mentoring) Leader	Received for work with graduates with disabilities
Green Workplace Awards	ESB wins the overall Green Workplace of the Year Award for its staff thermal imaging camera loan scheme
GradIreland 'most popular graduate employer' award	ESB wins the award in the energy sector
ESB Ranked World's third-smartest Network	IBM Smart Network ratings
Electric Ireland win 'Best Sports Sponsorship' and 'Best Use of TV' for its support for Team Ireland for the London Olympics 2012	Irish Sponsorship Awards 2012





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# 06

## GOVERNANCE



## 6.1 OVERVIEW

Good governance is good business. In pursuit of our goal of strong and sustainable growth the Board and management will remain committed to transparency and accountability in all we do.

ESB applies the principles of good corporate governance as set out in the Code of Practice for the Governance of State Bodies, the UK Corporate Governance Code and the Irish Corporate Governance Annex.

ESB has put in place the appropriate measures to comply with the Code of Practice for the Governance of State Bodies, updated in 2009. The code sets out the governance framework agreed by Government for the internal management and the internal and external reporting relationships, of commercial and non-commercial State bodies. ESB continuously reviews and updates its policies and procedures to ensure compliance with the code and best practice in corporate governance.

ESB also conforms as far as possible, and on a voluntary basis, to the UK Corporate Governance Code. Our compliance on a voluntary basis with the Corporate Governance Code demonstrates our commitment to the highest standards of governance and corporate behaviour.

## 6.2 ESB BOARD

The Board is responsible for the long-term success of ESB and decisions are only made after the necessary level of information has been made available to Board members and with due consideration of the risks identified through the risk management process.

The Board has reserved the following for its own consideration:

- Approval of Group strategy, annual budgets and annual and interim financial statements
- Review of operational and financial performance
- Approval of major capital expenditure
- Overall review of Group health and safety performance
- Appointment of the Chief Executive
- Appointments to senior management on the recommendation of the Chief Executive
- Appointment of the Company Secretary.

There are 11 scheduled Board meetings each year with additional Board meetings as required. Papers, including minutes of Board committees, are circulated in advance of each meeting.

There is an agreed procedure in place, which allows Board members to take independent professional advice in the course of their duties and all Board members have access to the advice of the Company Secretary.

Six committees of the Board assist in the execution of its responsibilities and the Board delegates specific responsibilities to those Board committees as set out in their terms of reference. The committees assist the Board by giving more detailed consideration to business, operational and governance issues and they report to the Board with any necessary recommendations. Further details of these committees are set out in the Annual Report 2012.

The ESB Board in 2012 brought the necessary experience, independence and challenge to ensure effective decision-making. The range of Board members' experience in politics, engineering, banking, law, accounting and in the energy industry is set out in their biographies in the Annual Report 2012. The Code of Practice provides that the Chairman may engage with Government on succession and this provides an opportunity for reviewing board composition and skills.

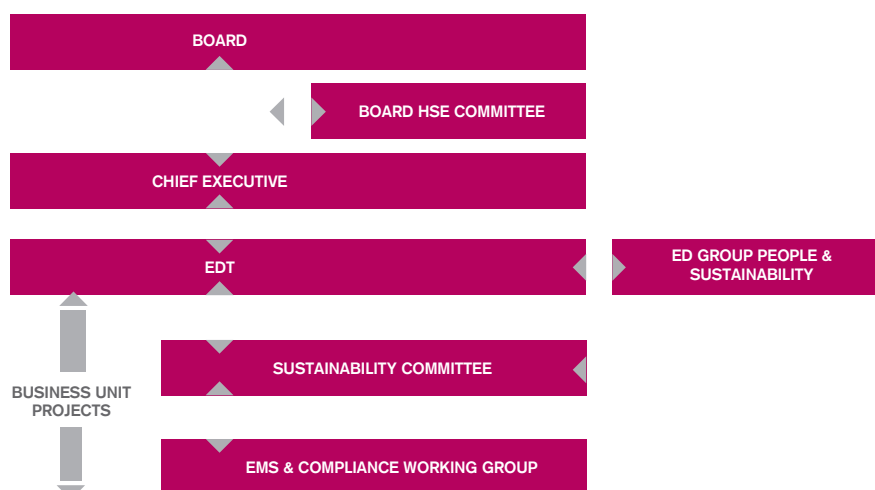
The State-sponsored structure of the company, the legislative provision for worker membership of the Board and our general partnership arrangement with our trade unions permits our owners and staff to have direct input into Board strategies and policies.

## 6.3 INTERNAL CONTROLS

The Board has overall responsibility for the Group's system of internal control and for monitoring its effectiveness. The system of internal control is designed to provide reasonable, but not absolute, assurance against material misstatement or loss. In order to discharge that responsibility in a manner which ensures compliance with legislation and regulations, the Board has established an organisational structure with clear operating and reporting procedures, lines of responsibility, authorisation limits, segregation of duties and delegated authority.

The Board has reviewed the effectiveness of the Group's system of internal control covering financial, operational and compliance controls and risk management systems. ESB has in place

## GOVERNANCE STRUCTURE WITHIN ESB



a strong control framework, which includes the following:

- A code of ethics that requires all Board members and employees to maintain the highest ethical standards in conducting business.
- Clearly defined organisational structure, with defined authority limits and reporting mechanisms to higher levels of management and to the Board which support the maintenance of a strong control environment.
- A corporate governance framework which includes risk analysis, financial control review and formal annual governance compliance statements by the management of business lines and in the Corporate Centre. This is monitored by the Group Internal Audit department, which reports to the Audit and Risk Committee on an ongoing basis.
- A comprehensive set of policies and procedures relating to operational and financial controls, including capital expenditure. Large capital projects require the approval of the Board, and are closely monitored on an ongoing basis by the Investment Committee of the Board. They can also be subject to post completion audits.
- Comprehensive budgeting systems with an annual budget approved by the Board.
- A comprehensive system of financial reporting.
- Cumulative monthly actual results are reported against budget. Any significant changes and adverse variances are questioned by the Board, and remedial action taken where appropriate.
- Consideration of operational and financial issues by Board Committees as described in the Annual Report 2012.
- A confidential helpline service to provide staff with a confidential, and if required, anonymous means to report fraud or ethical concerns.

#### 6.4 INTERNAL AUDIT

These controls are reviewed systematically by Group Internal Audit. In these reviews, emphasis is focused on areas of greater risk as identified by risk analysis. The Board, supported by the Audit and Risk Committee, review the effectiveness of the system of internal control, which includes:

- the review and consideration of the half-

yearly risk review process and regular risk management updates;

- independent advice on the adequacy of the current risk management process in operation in ESB;
- review and consideration of certifications from management of satisfactory and effective operation of systems of internal controls, both financial and operational;
- a review of the programme of Group Internal Audit and consideration of their findings and reports;
- a group internal audit. Also report regularly on the status of issues raised previously from their own reports and reports from the external auditor; and
- a review of reports of the external auditor, which contain details of any significant control issues identified, arising from its work as auditor.

#### 6.5 GOVERNANCE FOR SUSTAINABILITY

Overall responsibility for ESB's sustainability performance rests with the Board. The Health, Safety and Environment Committee of Board members, chaired by a senior Worker Director, assists the Board in its evaluation of sustainability performance. The Chief Executive has overall responsibility to the Board for sustainability management within the company.

The Executive Director Team comprised the Chief Executive, Deputy Chief Executive, six Executive Directors and the Company Secretary. This Committee agrees appropriate objectives, policies, targets and measurement indicators reflecting corporate strategy goals and oversees sustainability performance against these targets and indicators.

The Executive Director, Group People and Sustainability leads the development of ESB's sustainability strategy which aims to embed a sustainability culture within the company in support of the overall Corporate Strategy. He reports on sustainability performance for the Group.

A Sustainability Committee of senior managers from each business area is responsible for approval of the Sustainability Strategy and for driving sustainability across the Group. The committee is chaired by the Executive Director Group People and Sustainability and meets four times per year to review progress and overall group performance. Sustainability Managers are in place in each business area supported by line managers and a complementary grouping of volunteer Sustainability Champions has been put in place to actively drive culture change across the organisation.



Pat Naughton, Director Group People and Sustainability pictured with the ESB Sustainability Committee.



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# 07 ECONOMIC PERFORMANCE

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## 7.1. OVERVIEW

## KEY FACTS &amp; FIGURES

## OPERATING PROFIT\*

€415m

2012	€415m	-€54m -12%
2011	€469m	

## TOTAL ASSETS

€12,600m

2012	€12,600m	
2011	€12,539m	€61m 0.5%

## EBITDA\*

€1,095m

	€1,095m	-€26m -2%
	€1,121m	

## NET DEBT

€4,414m

	€4,414m	
	€4,324m	€90m 2%

## 7.2 ECONOMIC PERFORMANCE

ESB delivered a good set of financial results for 2012 in spite of a very challenging business environment. The Group recorded an operating profit of €415 million in 2012 (2011: €469 million). The results include an exceptional item (€161 million) which relates to costs associated with a voluntary severance scheme launched in

2012 as part of our Performance Improvement Programme.

The Board recommended a final dividend of 3.96 cent per unit of stock or €78.4 million in aggregate bringing total dividends over the last decade to almost €1 billion. In 2012, ESB's share of generation on an all-island basis was 48% and our share of the total supply business, again on an all-island basis was, 36%. Increasing interconnection to Britain and the arrival of large European utilities in our home market are transforming the competitive landscape.

The Board and management have developed and are implementing a long-term strategy to prepare ESB for these challenges. A significant step is the start of construction of our 881MW generating station at Carrington, near

Manchester. A further crucial element is our Performance Improvement Programme, which is aimed at taking €280 million of costs out of the business by 2015, right across the generation, networks and supply businesses. This focus on costs is essential if we are to continue to offer competitive products to our customers and protect the financial strength of ESB. The outlook for 2013 remains challenging, but we believe that our corporate strategy will position us to face these uncertainties.

## 7.3 INDIRECT ECONOMIC IMPACTS

The company contributed over €1 billion to the Irish economy in 2012 through purchases from Irish suppliers, wages, taxes and rates. In addition, we are proud to have contributed almost €1 billion in dividends to the State over the last decade.

## FINANCE REVIEW

## FIVE-YEAR SUMMARY

	2012 €M	2011 €M	2010 €M	2009 €M	2008 €M
Revenue and other operating income	3,295	2,995	2,740	3,114	3,515
Operating profit before exceptional items <sup>1</sup>	576	469	339	350	340
Adjusted profit before taxation <sup>2</sup>	351	283	249	335	304
EBITDA <sup>3</sup>	1,095	1,121	839	814	753
Capital expenditure <sup>4</sup>	765	883	819	921	1,094
Net debt	(4,414)	(4,324)	(3,944)	(2,231)	(2,088)
Gearing (%) <sup>5</sup>	53%	52%	50%	35%	40%
Total assets	12,600	12,539	12,112	9,567	8,645

1 Stated before the following exceptional items: 2012: staff exit costs (€161 million). 2010: pension charge (€330 million). 2009: profit on disposal of generating assets (€265 million).

2 Excludes market to market movements on RPI swaps and exceptional items.

3 Includes exceptional items (€161 million).

4 Excludes NIE acquisition in 2010 (€12 billion).

5 Excludes joint ventures.

## CAPITAL EXPENDITURE



■ ESB NETWORKS

■ ESB ENERGY INTERNATIONAL

■ ELECTRIC IRELAND

■ OTHER SEGMENTS

■ NIE

\*Capital expenditure in ESB Networks is stated after accounting adjustments primarily IFRIC 18 Transfer of assets from customers.

## 7.4. RISK MANAGEMENT MATRIX

Risks	Impact	Mitigation Strategies
<b>REGULATORY RISKS</b>		
<b>Compliance and Market Changes</b>	The principal regulatory risks faced by the Group originate from licence compliance, ring-fencing requirements, the impact of price control reviews, and an evolving EU regulatory framework. A range of regulatory items with potential impact on ESB activities are due for decision or review during 2013. These include approval of Article 9(9) certification of NIE and RoI transmission arrangements; the high level design for REM (Regional Electricity Market); and the NIE Price Review – RP5.	ESB manages these risks through a dedicated Regulatory Affairs teams which provide ongoing input to the development of the regulatory, trading and pricing regimes, and also monitors compliance with the Group's regulatory and licence requirements. ESB maintains a proactive and structured approach to consultations with regulatory authorities on market developments.
<b>OPERATIONAL RISKS</b>		
<b>Plant Performance Risk</b>	Failure to achieve the targeted performance and availability of existing generation plant through damage to ESB plant, incidents and breakdowns.	Such plant risks are minimised through ESB's well established plant safety and maintenance regimes, operating and technical procedures, and staff training. The Group also has in place appropriate insurance contracts to protect against financial loss from outages arising from plant damage. Plant availability was approximately 89%.
<b>Knowledge and Skills</b>	ESB has a high dependency on the technical competence of its management/staff. The Group especially needs to maintain high standards of competence in new and developing areas of the business. The Group is also conscious of the need to maintain skill levels in the context of the significant staff number reductions and re-assignments arising from the 2012 re-organisation and VS scheme.	ESB is determined to maintain the necessary knowledge and skills for high levels of competitiveness both in the Irish market and abroad. To this end, ESB continues to invest in staff training and development and in ongoing performance improvement, particularly in the context of people management and new technologies such as smart metering, renewables, electric vehicles and smart grids.
<b>Business Processes and IT systems</b>	ESB's Enterprise Risk processes identify and address (escalating where appropriate) operational risks that could lead to losses or reputational damage from mistakes or shortcomings in the Group's business processes and IT systems.	Each Business Unit is responsible for limiting and managing operational risks within its area of responsibility by ensuring that well documented routines, reliable IT systems and satisfactory internal controls are in place. From a Group perspective, the Chief Information Officer is responsible for ESB's overall IT strategy, including governance arrangements for the security/reliability of IT infrastructure and systems. Internal controls, including IT governance, are subject to internal and external audit. The planning of the Group's internal audit programme takes account of potential operational risks identified by the risk management framework.
<b>Investments/ Project Execution Risk</b>	ESB is making significant capital investments in Network infrastructure and Generation Plant. Failure to bring in capital projects on time and on budget could lead to losses on capital or not deliver the business plan returns.	ESB ensures that strong project management/delivery approval is rigorously applied to all major projects. Regular reviews of appropriateness of business cases, market conditions and timings of investments are performed.
<b>Successful Delivery of Change</b>	The full benefits of agreed change programmes are not delivered or are delayed.	ESB is maintaining a continued focus on improving overall cost competitiveness and delivering the remaining cost improvement targets of its Performance Improvement Plan agreed in 2012. The challenging targets of this programme remain on track to be met in early 2013. New organisation structures were implemented from September 2012, and a voluntary severance scheme was launched resulting in significant reductions in staff numbers by year end. Significant IT and business process change is progressing to introduce further efficiencies across the Group. As part of the strategic review during 2012, a new People strategy has been developed which will be rolled out in 2013, focusing on enhanced workforce engagement and developing a high performance culture.
<b>Reputation and Public standing</b>	Reputational risk could arise from damage to the group's image, credibility, standing with customers and key stakeholders and which could impair its ability to retain and generate business. Such damage may result from a breakdown of trust, confidence or business relationships. Safeguarding the group's reputation is important to its continued success.	As part of the ERM process, each business unit is responsible for identifying, assessing and determining all reputational risks that may arise within their respective areas of business. The reputational impact of such risks is considered alongside financial or other impacts. Matters identified at BU level as a reputational risk to the group are reported and escalated as necessary through our ERM risk reporting process. Should a risk event occur, the Group's crisis management processes are designed to minimise the reputational impact of an event. Crisis management teams are in place both at Corporate and Business Unit Level to ensure the effective management of any such events. This includes ensuring through our Corporate Communications that the Group's perspective is represented fairly in the media.

Risks	Impact	Mitigation Strategies
SAFETY AND ENVIRONMENT RISKS		
Injury to Staff, Contractors and the General Public	As a major energy utility, ESB is committed to the highest possible safety standards to protect against the risk of injury to staff, contractors and the general public.	ESB rigorously enforces its safety policies and standards to achieve its ultimate target of zero injuries. An extensive safety leadership programme, fully supported by the Board and Management, is in place throughout ESB to address key safety issues. Staff and Management at all levels are involved in undertaking safety audits and reviews. In relation to public safety, ongoing media and direct marketing campaigns are run to increase public awareness of the risks and dangers. ESB has a strategic partnership with the Health and Safety Authority to improve electrical safety in the construction and agricultural sectors.
Environment and Climate Change	Many ESB activities have potential for significant environmental impact and are regulated by relevant national and EU laws.	Strong control and regular compliance auditing are a feature of ESB's environmental protection systems. The Group commits significant resources towards ensuring compliance with applicable planning and environmental laws/regulations and works closely with all relevant authorities. To address the challenges of climate change, ESB is pursuing an ambitious carbon reductions strategy and investing strongly in renewable energy and environmental friendly technology.
COMMERCIAL AND MARKET RISKS		
Competitor Action	The Group faces strong competition in all its markets. The level of competitor activity in the domestic supply sector has fundamentally altered the nature of this market.	ESB continues to adapt to changes in the market place, new entrants and anticipated developments for 2013, such as the planned sale of Bord Gáis Energy and East-West Interconnection. ESB participates in all CER consultations regarding further market deregulation and in line with CER approvals, has implemented new structures and systems appropriate to the competitive market. New organisation structures have been implemented in 2012, entry to the gas market has progressed well and the Electric Ireland brand has become firmly established. The Company for 2013 will continue to develop dynamic product and pricing strategies that will be responsive to changing market conditions.
Economic and Market conditions	The prevailing macroeconomic environment and uncertainty in financial markets present risks and challenges to the Group's profitability levels and potentially to delivery of the Group's investment and growth targets.	ESB is addressing the various risks and uncertainty associated with the current economic climate. The ongoing financial market uncertainty is closely monitored by ESB Group Treasury. Our risk management process has helped to identify and manage the increased financial risks. Performance risks specific to each business are identified in individual risk plans, where specific mitigation actions are planned and assigned. As part of this process, new organisational structures have been established to deliver the Group's strategy, adjust to new cost structures and to meet the challenges of the current economic environment. The company's cost reduction programme with the aim of taking €280 million out of the cost base by 2015, is progressing to target.
Trading Risk	Power prices in the SEM, and fuel prices paid by the Group in connection with its electricity generating activities, have shown significant volatility in recent years. ESB's profits can be materially affected by changes in power prices, fuel and CO <sub>2</sub> prices, and by relative movements between prices of different fuel types.	ESB has adopted an appropriate trading and hedging strategy to manage potential price volatility and uncertainty in the SEM. Financial contracts are entered into and trading decisions are taken in line with this strategy. Business Units have strengthened their traditional energy trading functions to ensure the full extent of ongoing SEM trading positions is fully understood and managed. In line with regulatory ringfencing requirements, Business Units participating in the SEM market maintain the appropriate trading capability, structures and systems for effective management of risk in the SEM. The embedded risk management and controls covering trading activities that apply in the relevant Business Units are subject to a strict governance and reporting regime, including regular review by Group Internal Audit.
Funding and Liquidity	<p>The key financial risk areas facing the Group include exposure to foreign exchange rates, interest rates, funding, liquidity risk, and reliance on related financial and operational controls.</p> <p>This risk also relates to ESB's continuing ability to secure adequate funding at appropriate cost for planned investments and to maintaining ESB's credit metrics within rating targets.</p>	Group Treasury is responsible for the day-to-day treasury activities of the Group, including the trading of specific derivative instruments to mitigate these risks. Policies and procedures to protect the Group from the treasury/financial risks are regularly reviewed, revised and approved by the Board as appropriate. ESB has continued to successfully raise funds in 2012. ESB issued two benchmark Eurobond in September and November totaling €1.1 billion at a blended tenor and cost of six years and 5.5%. ESB maintains an overall financing strategy that takes account of market conditions and is appropriate to ESB's strategic plan and targets. The Group's policy is to maintain strong liquidity to meet funding requirements for more than a year ahead, and to access funds from a diverse range of markets. The Company has a very strong liquidity position. Group Treasury continue to monitor the markets and further transactions will be considered in 2013 following the significant bond issuances of 2012.
ESB Pensions	The ongoing volatility in financial markets, current economic conditions and the pensions levy imposed on all pension funds continues to be challenging for Pension Funds.	The Scheme's funding plan regarding the Minimum Funding standard (MFS) was approved by the Pensions Board. The ongoing actuarial review shows the scheme to be broadly in balance and investment performance continues to be monitored closely.





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# 08 APPENDICES

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## 8.1 INDEPENDENT ASSURANCE STATEMENT



### GRI Application Level Check

DNV Business Assurance (hereafter 'DNV') was engaged by ESB to carry out an independent review of the GRI Application Level for ESB's 2012 Sustainability Report (hereafter 'the report').

Following a review of ESB's 2012 Sustainability Report against the GRI G3.1 requirements, DNV confirms that the report has achieved an application level of C+.

GRI Application Levels communicate the extent to which a sustainability report has been developed in accordance with the GRI guidelines. DNV's independent review confirms that the required set and number of disclosures for Application Level C have been addressed in ESB's reporting and the GRI Table of disclosures within the report's appendix demonstrates a valid representation of the required disclosures, in accordance with the GRI G3.1 requirements.

This statement does not provide an opinion on ESB's sustainability performance in 2012 nor on the quality of information in the report. DNV has not been engaged by ESB on any other commitments in 2012 which could compromise the independence of our statement.

DNV has also provided ESB with a set of recommendations for improvements to future reporting, for internal use.

### Prepared by Technical Review:

**Priti Nigam**  
Senior Consultant  
DNV Business Assurance

### Technical Review:

**Douglas Farquhar**  
Director  
DNV Business Assurance

## 8.2 GRI CROSS REFERENCING TABLE OF DISCLOSURES

STANDARD DISCLOSURES PART I: Profile Disclosures			
1. Strategy and Analysis			
Profile Disclosure	Disclosure	Level of reporting	Location of disclosure
1.1	Statement from the most senior decision-maker of the organisation.	Fully	Sec 1.1
1.2	Description of key impacts, risks, and opportunities.	Partially	Sec 7.4
2. Organisational Profile			
2.1	Name of the organisation.	Fully	Section 2.1
2.2	Primary brands, products, and/or services.	Fully	Section 2.1
2.3	Operational structure of the organisation, including main divisions, operating companies, subsidiaries, and joint ventures.	Fully	Section 2.1 and 2012 Annual Report
2.4	Location of organisation's headquarters.	Fully	Section 2.1
2.5	Number of countries where the organisation operates, and names of countries with either major operations or that are specifically relevant to the sustainability issues covered in the report.	Partially	Section 2.1
2.6	Nature of ownership and legal form.	Fully	Section 2.1
2.7	Markets served (including geographic breakdown, sectors served, and types of customers/beneficiaries).	Partially	Section 2.1
2.8	Scale of the reporting organisation.	Fully	Section 5.3
2.9	Significant changes during the reporting period regarding size, structure, or ownership.	Fully	Page 4, Sec 2.3
2.10	Awards received in the reporting period.	Fully	Page 35
3. Report Parameters			
3.1	Reporting period (e.g., fiscal/calendar year) for information provided.	Fully	Section 2.6
3.2	Date of most recent previous report (if any).	Fully	Section 2.6
3.3	Reporting cycle (annual, biennial, etc.)	Fully	Sec 2.4
3.4	Contact point for questions regarding the report or its contents.	Fully	Page 2
3.5	Process for defining report content.	Partially	Sec 2.4
3.6	Boundary of the report (e.g., countries, divisions, subsidiaries, leased facilities, joint ventures, suppliers). See GRI Boundary Protocol for further guidance.	Partially	Sec 2.4
3.7	State any specific limitations on the scope or boundary of the report (see completeness principle for explanation of scope).	Not	
3.8	Basis for reporting on joint ventures, subsidiaries, leased facilities, outsourced operations, and other entities that can significantly affect comparability from period to period and/or between organisations.	Fully	Sec 2.8
3.9	Data measurement techniques and the bases of calculations, including assumptions and techniques underlying estimations applied to the compilation of the Indicators and other information in the report. Explain any decisions not to apply, or to substantially diverge from, the GRI Indicator Protocols.	Partially	Sec 8
3.10	Explanation of the effect of any re-statements of information provided in earlier reports, and the reasons for such re-statement (e.g., mergers/acquisitions, change of base years/periods, nature of business, measurement methods).	Fully	Not applicable as no figures have been restated
3.11	Significant changes from previous reporting periods in the scope, boundary, or measurement methods applied in the report.	Fully	No change in scope. Names or relevant business units included may have changed in some cases
3.12	Table identifying the location of the Standard Disclosures in the report.	Fully	Section 8



3.13	Policy and current practice with regard to seeking external assurance for the report.	Partially	Process is underway
<b>4. Governance, Commitments and Engagement</b>			
4.1	Governance structure of the organisation, including committees under the highest governance body responsible for specific tasks, such as setting strategy or organisational oversight.	Partially	Section 6.0
4.2	Indicate whether the Chair of the highest governance body is also an executive officer.	Fully	Chief Executive
4.3	For organisations that have a unitary board structure, state the number of members of the highest governance body that are independent and/or non-executive members.	Fully	2012 Annual Report, page 45
4.4	Mechanisms for shareholders and employees to provide recommendations or direction to the highest governance body.	Fully	Sec 6.0
4.5	Linkage between compensation for members of the highest governance body, senior managers, and executives (including departure arrangements), and the organisation's performance (including social and environmental performance).	Partially	2012 Annual Report, page 55
4.6	Processes in place for the highest governance body to ensure conflicts of interest are avoided.	Fully	Sec 6.3
4.7	Process for determining the qualifications and expertise of the members of the highest governance body for guiding the organisation's strategy on economic, environmental, and social topics.	Fully	Sec 6.2
4.8	Internally developed statements of mission or values, codes of conduct, and principles relevant to economic, environmental, and social performance and the status of their implementation.	Fully	Sec 2.3, 2.4, 4.1, 5.0
4.9	Procedures of the highest governance body for overseeing the organisation's identification and management of economic, environmental, and social performance, including relevant risks and opportunities, and adherence or compliance with internationally agreed standards, codes of conduct, and principles.	Fully	Sec 6.0
4.10	Processes for evaluating the highest governance body's own performance, particularly with respect to economic, environmental, and social performance.	Fully	Sec 6.3, 6.4, 6.5
4.11	Explanation of whether and how the precautionary approach or principle is addressed by the organisation.	Not	
4.12	Externally developed economic, environmental, and social charters, principles, or other initiatives to which the organisation subscribes or endorses.	Fully	Sec 2.5, 5.6, 5.7
4.13	Memberships in associations (such as industry associations) and/or national/international advocacy organisations in which the organisation: * Has positions in governance bodies; * Participates in projects or committees; * Provides substantive funding beyond routine membership dues; or * Views membership as strategic.	Fully	Sec 2.5, 5.6, 5.7
4.14	List of stakeholder groups engaged by the organisation.	Fully	Sec 2.5
4.15	Basis for identification and selection of stakeholders with whom to engage.	Partially	Sec 2.5
4.16	Approaches to stakeholder engagement, including frequency of engagement by type and by stakeholder group.	Partially	Sec 2.5
4.17	Key topics and concerns that have been raised through stakeholder engagement, and how the organisation has responded to those key topics and concerns, including through its reporting.	Not	
<b>STANDARD DISCLOSURES PART II: Disclosures on Management Approach (DMAs)</b>			
<b>Disclosure on Management Approach EC</b>			
EU1	Installed capacity, broken down by primary energy source and by regulatory regime.	Partially	Sec 2.1

<b>EU2</b>	Net energy output broken down by primary energy source and by regulatory regime.	Partially	Sec 2.1
<b>EU3</b>	Number of residential, industrial, institutional and commercial customer accounts.	Not	
<b>EU4</b>	Length of above and underground transmission and distribution lines by regulatory regime.	Partially	Sec. 2.1, 2012 Annual Report page 28
<b>EU5</b>	Allocation of CO <sub>2</sub> e emissions allowances or equivalent, broken down by carbon trading framework.	Partially	Sec 4.3
<b>Aspects</b>	Economic performance	Fully	Sec 2.1, Sec. 7
	Market presence	Fully	Sec. 2.1
	Indirect economic impacts	Fully	Sec 7.3
	Availability and reliability	Not	Not disclosed
<b>EU6</b>	Management approach to ensure short and long-term electricity availability and reliability.	Fully	Sec. 2.1
	Demand-side management	Fully	Sec 2.1
<b>EU7</b>	Demand-side management programmes including residential, commercial, institutional and industrial programmes.	Partially	Sec 2.1
	System efficiency	Partially	Sec 2.1
	Research and development	Fully	Sec 2.1
<b>EU8</b>	Research and development activity and expenditure aimed at providing reliable electricity and promoting sustainable development.	Fully	Sec 2.1
	Plant decommissioning	N/A	
<b>EU9</b>	Provisions for decommissioning of nuclear power sites.	N/A	N/A
<b>Disclosure on Management Approach EN</b>			
<b>Aspects</b>	MaterialsCOMM	Fully	Sec 4.9
	Energy	Fully	Sec 4.7
	WaterCOMM	Fully	Sec 4.4,
	BiodiversityCOMM	Fully	Sec 4.8
	Emissions, effluents and wasteCOMM	Fully	Sec 4.2, 4.3 and 4.5
	Products and services	Fully	Sec 2.1
	Compliance	Not	Sec 4.12
	Transport	Fully	Sec 4.6
	Overall	Fully	Sec 4.1
<b>Disclosure on Management Approach LA</b>			
<b>Aspects</b>	Employment	Fully	Sec 5.3
<b>EU14</b>	Programmes and processes to ensure the availability of a skilled workforce	Fully	Sec 5.3, 5.5
<b>EU15</b>	Percentage of employees eligible to retire in the next five and ten years broken down by job category and by region	Not	Not disclosed
<b>EU16</b>	Policies and requirements regarding health and safety of employees and employees of contractors and subcontractors	Fully	Section 3
	Labour/management relations	Partially	2012 Annual Report, page 40
	Occupational health and safety	Fully	Sec 3
	Training and education	Fully	Sec 5.5
	Diversity and equal opportunity	Fully	Sec 5.7

Disclosure on Management Approach HR			
<b>Aspects</b>	Investment and procurement practices	Fully	Sec 2.1 , 2.2, 2.8
	Non-discrimination	Partially	Sec 5.2, 5.3, 5.7
	Freedom of association and collective bargaining	N/A	Not Applicable
	Child labour	N/A	Not Applicable
	Forced and compulsory labour	N/A	Not Applicable
	Security practices	N/A	Not Applicable
	Indigenous rights	N/A	Not Applicable
Disclosure on Management Approach SO			
<b>Aspects</b>	Community	Fully	Section 5.0
<b>EU19</b>	Stakeholder participation in the decision-making process related to energy planning and infrastructure development.	Not	Not disclosed
<b>EU20</b>	Approach to managing the impacts of displacement	Not	Not disclosed
	Corruption	Not	Not disclosed
	Public policy	Not	Not disclosed
	Anti-competitive behavior	Fully	Sec 7.4
	Compliance	Fully	Sec 5.12, Sec 6.0
	Disaster/Emergency planning and response	Not	Not disclosed
<b>EU21</b>	Contingency planning measures, disaster/emergency management plan and training programmes, and recovery/restoration plans.	Not	Not disclosed
Disclosure on Management Approach PR			
<b>Aspects</b>	Customer health and safety	Fully	Section 3.5
	Product and service labelling	N/A	Not Applicable
	Marketing communications	Partially	Sec 2.1
	Customer privacy	Not	Not disclosed
	Compliance	Fully	Section 5.12, Sec 6
	Access	Fully	Sec 2.1
<b>EU23</b>	Programmes, including those in partnership with government, to improve or maintain access to electricity and customer support services.	Fully	Sec 2.1
	Provision of information	Fully	Sec 2.1
<b>EU24</b>	Practices to address language, cultural, low literacy and disability related barriers to accessing and safely using electricity and customer support services.	Fully	Sec 2.1
STANDARD DISCLOSURES PART III: Performance Indicators			
Economic performance			
<b>EC1</b>	Direct economic value generated and distributed, including revenues, operating costs, employee compensation, donations and other community investments, retained earnings, and payments to capital providers and governments.	Fully	Sec 7.3, 2012 Annual Report page 19
<b>EC2</b>	Financial implications and other risks and opportunities for the organisation's activities due to climate change.	Partially	Sec 7.4
<b>EC3</b>	Coverage of the organisation's defined benefit plan obligations.	Partially	2012 Annual Report
<b>EC4</b>	Significant financial assistance received from government.	Partially	2012 Annual Report
Market Presence			



<b>EC5</b>	Range of ratios of standard entry level wage compared to local minimum wage at significant locations of operation.	Not	Not disclosed
<b>EC6</b>	Policy, practices, and proportion of spending on locally-based suppliers at significant locations of operation.	Not	Not disclosed
<b>EC7</b>	Procedures for local hiring and proportion of senior management hired from the local community at significant locations of operation.	Not	Not disclosed
<b>Indirect economic impacts</b>			
<b>EC8</b>	Development and impact of infrastructure investments and services provided primarily for public benefit through commercial, in-kind, or pro bono engagement.	Partially	Sec 5.2 , 2.1, 7.3
<b>EC9</b>	Understanding and describing significant indirect economic impacts, including the extent of impacts.	Partially	Sec 7.3
<b>Availability and reliability</b>			
<b>EU10</b>	Planned capacity against projected electricity demand over the long-term, broken down by energy source and regulatory regime.	Partially	Sec 2.1
<b>System efficiency</b>			
<b>EU11</b>	Average generation efficiency of thermal plants by energy source and regulatory regime.	Not	Not disclosed
<b>EU12</b>	Transmission and distribution losses as a percentage of total energy.	Partially	Sec 2.1
<b>Environmental</b>			
<b>Materials</b>			
<b>EN1COMM</b>	Materials used by weight or volume.	Not	Not disclosed
<b>EN2</b>	Percentage of materials used that are recycled input materials.	Not	Not disclosed
<b>Energy</b>			
<b>EN3</b>	Direct energy consumption by primary energy source.	Fully	Sec 4.7
<b>EN4</b>	Indirect energy consumption by primary source.	Not	Not disclosed
<b>EN5</b>	Energy saved due to conservation and efficiency improvements.	Not	Not disclosed
<b>EN6</b>	Initiatives to provide energy-efficient or renewable energy based products and services, and reductions in energy requirements as a result of these initiatives.	Partially	Sec. 2.1, 4.7
<b>EN7</b>	Initiatives to reduce indirect energy consumption and reductions achieved.	Partially	Sec 4.7
<b>Water</b>			
<b>EN8COMM</b>	Total water withdrawal by source.	Not	Sec 2.1, 4.4
<b>EN9</b>	Water sources significantly affected by withdrawal of water.	Not	Not disclosed
<b>EN10</b>	Percentage and total volume of water recycled and reused.	Not	Not disclosed
<b>Biodiversity</b>			
<b>EN11</b>	Location and size of land owned, leased, managed in, or adjacent to, protected areas and areas of high biodiversity value outside protected areas.	Fully	Sec 4.8
<b>EN12COMM</b>	Description of significant impacts of activities, products, and services on biodiversity in protected areas and areas of high biodiversity value outside protected areas.	Partially	Sec 4.8
<b>EU13</b>	Biodiversity of offset habitats compared to the biodiversity of the affected areas	Not	Not disclosed
<b>EN13</b>	Habitats protected or restored.	Not	Not disclosed
<b>EN14COMM</b>	Strategies, current actions, and future plans for managing impacts on biodiversity.	Fully	Sec 4.8

<b>EN15</b>	Number of IUCN Red List species and national conservation list species with habitats in areas affected by operations, by level of extinction risk.	Not	Not disclosed
<b>Emissions, effluents and waste</b>			
<b>EN16COMM</b>	Total direct and indirect greenhouse gas emissions by weight.	Partially	Sec 4.3
<b>EN17</b>	Other relevant indirect greenhouse gas emissions by weight.	Not	Not disclosed
<b>EN18COMM</b>	Initiatives to reduce greenhouse gas emissions and reductions achieved.	Partially	Sec 4.7
<b>EN19</b>	Emissions of ozone-depleting substances by weight.	Not	Not disclosed
<b>EN20COMM</b>	NOx, SOx, and other significant air emissions by type and weight.	Fully	Sec 4.3
<b>EN21COMM</b>	Total water discharge by quality and destination.	Not	Not disclosed
<b>EN22COMM</b>	Total weight of waste by type and disposal method.	Partially	Sec 4.5
<b>EN23</b>	Total number and volume of significant spills.	N/A	Not disclosed, none in 2012
<b>EN24</b>	Weight of transported, imported, exported, or treated waste deemed hazardous under the terms of the Basel Convention Annex I, II, III, and VIII, and percentage of transported waste shipped internationally.	N/A	Not disclosed, none in 2012
<b>EN25</b>	Identity, size, protected status, and biodiversity value of water bodies and related habitats significantly affected by the reporting organisation's discharges of water and runoff.	Partially	Sec 4.8
<b>Products and services</b>			
<b>EN26</b>	Initiatives to mitigate environmental impacts of products and services, and extent of impact mitigation.	Partially	Sec 2.1, 4.7
<b>EN27</b>	Percentage of products sold and their packaging materials that are reclaimed by category.	N/A	Not applicable
<b>Compliance</b>			
<b>EN28</b>	Monetary value of significant fines and total number of non-monetary sanctions for non-compliance with environmental laws and regulations.	N/A	Not disclosed, none in 2012
<b>Transport</b>			
<b>EN29</b>	Significant environmental impacts of transporting products and other goods and materials used for the organisation's operations, and transporting members of the workforce.	Partially	Sec 4.6
<b>Overall</b>			
<b>EN30</b>	Total environmental protection expenditures and investments by type.	Not	Not disclosed
<b>Social: Labor Practices and Decent Work</b>			
<b>Employment</b>			
<b>LA1COMM</b>	Total workforce by employment type, employment contract, and region.	Partially	Sec 5.2
<b>LA2COMM</b>	Total number and rate of employee turnover by age group, gender, and region.	Not	Not disclosed
<b>EU17</b>	Days worked by contractor and subcontractor employees involved in construction, operation and maintenance activities.	Not	Not disclosed
<b>EU18</b>	Percentage of contractor and subcontractor employees that have undergone relevant health and safety training.	Partially	
<b>LA3</b>	Benefits provided to full-time employees that are not provided to temporary or part-time employees, by major operations.	Not	Not disclosed
<b>Labor/management relations</b>			
<b>LA4COMM</b>	Percentage of employees covered by collective bargaining agreements.	Not	Not disclosed
<b>LA5</b>	Minimum notice period(s) regarding significant operational changes, including whether it is specified in collective agreements.	Not	Not disclosed

Occupational health and safety			
LA6	Percentage of total workforce represented in formal joint management-worker health and safety committees that help monitor and advise on occupational health and safety programmes.	Partially	Sec 3.6
LA7COMM	Rates of injury, occupational diseases, lost days, and absenteeism, and number of work-related fatalities by region.	Partially	Sec 3
LA8	Education, training, counseling, prevention, and risk-control programmes in place to assist workforce members, their families, or community members regarding serious diseases.	Partially	Sec 3, sec 5
LA9	Health and safety topics covered in formal agreements with trade unions.	Not	Not disclosed
Training and education			
LA10	Average hours of training per year per employee by employee category.	Not	Not disclosed
LA11	Programmes for skills management and lifelong learning that support the continued employability of employees and assist them in managing career endings.	Partially	Sec 5.5, 5.6
LA12	Percentage of employees receiving regular performance and career development reviews.	Not	Sec 5.5, 5.6
Diversity and equal opportunity			
LA13	Composition of governance bodies and breakdown of employees per category according to gender, age group, minority group membership, and other indicators of diversity.	Partially	Sec 5.3
LA14	Ratio of basic salary of men to women by employee category.	Not	Not disclosed
Social: Human Rights			
Investment and procurement practices			
HR1	Percentage and total number of significant investment agreements that include human rights clauses or that have undergone human rights screening.	Not	Not disclosed
HR2	Percentage of significant suppliers and contractors that have undergone screening on human rights and actions taken.	Not	Not disclosed
HR3	Total hours of employee training on policies and procedures concerning aspects of human rights that are relevant to operations, including the percentage of employees trained.	Not	Not disclosed
Non-discrimination			
HR4	Total number of incidents of discrimination and actions taken.	Not	Not disclosed
Freedom of association and collective bargaining			
HR5COMM	Operations identified in which the right to exercise freedom of association and collective bargaining may be at significant risk, and actions taken to support these rights.	Not	Not disclosed
Child labor			
HR6	Operations identified as having significant risk for incidents of child labour, and measures taken to contribute to the elimination of child labour.	N/A	Not Applicable
Forced and compulsory labor			
HR7	Operations identified as having significant risk for incidents of forced or compulsory labour, and measures to contribute to the elimination of forced or compulsory labour.	Not	Not disclosed. All contracts that employ a significant number of contracting staff are subject to a Contractor Employment Standards process
Security practices			



<b>HR8</b>	Percentage of security personnel trained in the organisation's policies or procedures concerning aspects of human rights that are relevant to operations.	N/A	Not Applicable
<b>Indigenous rights</b>			
<b>HR9</b>	Total number of incidents of violations involving rights of indigenous people and actions taken.	N/A	Not Applicable
<b>Social: Society</b>			
<b>Community</b>			
<b>SO1COMM</b>	Nature, scope, and effectiveness of any programmes and practices that assess and manage the impacts of operations on communities, including entering, operating, and exiting.	Not	Not disclosed
<b>EU22</b>	Number of people physically or economically displaced and compensation, broken down by type of project.	N/A	Not applicable
<b>Corruption</b>			
<b>SO2</b>	Percentage and total number of business units analysed for risks related to corruption.	Not	Not disclosed
<b>SO3</b>	Percentage of employees trained in organisation's anti-corruption policies and procedures.	Not	Not disclosed
<b>SO4</b>	Actions taken in response to incidents of corruption.	Not	Not disclosed. No issues of corruption reported in 2012. A business ethics policy is in place
<b>Public policy</b>			
<b>SO5</b>	Public policy positions and participation in public policy development and lobbying.	Partially	Sec 2.1, 2.5
<b>SO6</b>	Total value of financial and in-kind contributions to political parties, politicians, and related institutions by country.	Not	Not disclosed
<b>Anti-competitive behavior</b>			
<b>SO7</b>	Total number of legal actions for anti-competitive behavior, anti-trust, and monopoly practices and their outcomes.	Not	Not disclosed
<b>Compliance</b>			
<b>SO8</b>	Monetary value of significant fines and total number of non-monetary sanctions for non-compliance with laws and regulations.	Not	Not disclosed
<b>Social: Product Responsibility</b>			
<b>Customer health and safety</b>			
<b>PR1COMM</b>	Life cycle stages in which health and safety impacts of products and services are assessed for improvement, and percentage of significant products and services categories subject to such procedures.	Partially	Sec 3
<b>PR2</b>	Total number of incidents of non-compliance with regulations and voluntary codes concerning health and safety impacts of products and services during their life cycle, by type of outcomes.	Not	Not disclosed
<b>EU25</b>	Number of injuries and fatalities to the public involving company assets, including legal judgments, settlements and pending legal cases of diseases.	Partially	Sec 3
<b>Product and service labeling</b>			
<b>PR3</b>	Type of product and service information required by procedures, and percentage of significant products and services subject to such information requirements.	N/A	Not applicable
<b>PR4</b>	Total number of incidents of non-compliance with regulations and voluntary codes concerning product and service information and labeling, by type of outcomes.	N/A	Not applicable

<b>PR5</b>	Practices related to customer satisfaction, including results of surveys measuring customer satisfaction.	Fully	Sec 2.1
<b>Marketing communications</b>			
<b>PR6</b>	Programmes for adherence to laws, standards, and voluntary codes related to marketing communications, including advertising, promotion, and sponsorship.	Not	Not disclosed
<b>PR7</b>	Total number of incidents of non-compliance with regulations and voluntary codes concerning marketing communications, including advertising, promotion, and sponsorship by type of outcomes.	Not	Not disclosed
<b>Customer privacy</b>			
<b>PR8</b>	Total number of substantiated complaints regarding breaches of customer privacy and losses of customer data.	Not	Not disclosed
<b>Compliance</b>			
<b>PR9</b>	Monetary value of significant fines for non-compliance with laws and regulations concerning the provision and use of products and services.	Not	Not disclosed
<b>Access</b>			
<b>EU26</b>	Percentage of population unserved in licensed distribution or service areas.	Not	Not disclosed
<b>EU27</b>	Number of residential disconnections for non-payment, broken down by duration of disconnection and by regulatory regime.	Not	Not disclosed
<b>EU28</b>	Power outage frequency.	Not	Not disclosed
<b>EU29</b>	Average power outage duration.	Not	Not disclosed
<b>EU30</b>	Average plant availability factor by energy source and by regulatory regime.	Not	Not disclosed